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A posthuman curriculum: subjectivity at the crossroads of time

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A POSTHUMAN CURRICULUM: SUBJECTIVITY AT THE CROSSROADS OF TIME

A Dissertation:

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Educational Theory, Policy, and Practice

by
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August 2012
DEDICATION

This study is dedicated to my parents, Lyle Petitfils and Sylvia Palmisano Petitfils, who have taught me everything worth knowing, and to the memory of my grandparents: Earl Petitfils, Ruby Cleveland Courtade Petitfils, Salvatore Palmisano, and Alice Maye Chaisson Palmisano. I wish they had lived to see me complete this journey.
ACKNOWLEDGEMENTS

As the proverb suggests, “a journey of a thousand miles begins with a single step.” My doctoral journey would not have begun without the prodding of Ms. Anita Cage, a fascinating and wise soul who snapped me out of my post-Katrina mental malaise in 2007 and convinced me to return to school. Anita, you and your life story are inspirational, and I am eternally grateful that you have become such a dear friend through the years. Thank you.

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And, finally, to my current and former students in my first year seminar, “Hypermedia and Hyperlearning,” you all have been an inspiration to me, and have reminded me that – at least
for the time being – there is still hope for resisting digital colonization. You must fight fiercely to maintain your humanness.
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ABSTRACT

This investigation is focused on three critical issues facing educators in the 21st century: how technology is reshaping what it means to be human, the shift from the human era to the posthuman era and the implications of that shift on subjectivity, and the purpose of undergraduate education in a posthuman era. The current shift towards a posthuman worldview is a radical break from the modern and postmodern 20th century, when identity was constructed in terms of possibilities and multiplicities. Instead, in the hyperreal 21st century, subjectivity is complicated by homogenization and the radical sameness of simulated technological experiences. Also, whereas the modern and postmodern eras were human-centered, the posthuman era brings with it a shift from a human-centered to a machine-centered worldview. To illustrate a comparable historical shift, the investigation revisits the fifteenth and sixteenth centuries and the transition from the medieval period to the Renaissance. In that shift, the focus turned from a theocentric (God-centered) worldview to a humanistic (human-centered) worldview. From a genealogical perspective, this historical glance can help demonstrate how notions of humanness were privileged in the face of radical social chaos. In the end, when theorizing about the purpose of undergraduate education in a posthuman era, a poststructural examination of modernity is undertaken that explores threads of the lives of young people and the implications of ubiquitous screen culture on their daily lived experiences. Finally, a posthuman curriculum is proposed, which seeks to reawaken attention of the human experience in a digital age.
The rise of the university, with its emphasis on specialized learning as the only learning worth having, has set a premium on intensity rather than breadth of attainment... the modern university instructor... rarely has much of the broad outlook upon things which was noticeably characteristic of the older culture... the higher the standard of the institution, the less place it seems to have for men and women whose chief power is their ability to teach. It is the making of books, and not the training of the young in habits of thought and work, that holds out to the teacher of today the main promise of reward.

From “The Decline of Teaching”
The Nation
March 8, 1900

This century-old editorial suggested that teaching was being separated from scholarship, insinuating that the two are mutually exclusive. The tone grieved for a nostalgic past where liberal education was valued over the scientific specificity of the era. In this excerpt, there is a clear message: as university faculty focus more on their own research, the students themselves ultimately suffer, deprived of the benefit of the breadth and depth offered by an education based in the humanities. Whereas once, the university was a place for young people to grow and form their own understandings of the world, built from a foundation grounded in the liberal arts (breadth over depth), the editorial suggested the university of 1900 did not value such a dated model, to the detriment of its students. This change highlights the move from a humanities-based education to a science-based education; it reflects a shift in many spheres beyond the academic (social, political, economic) and values the role of rational empiricism above all else. This scientific emphasis certainly did not begin in the nineteenth century. Indeed, the groundwork laid by Descartes in the seventeenth century served as a foundation for the three subsequent centuries of rational-empirical experiments. In higher education, this genealogy is noteworthy, as it has transformed the role of the academy as suggested by Boyer (1990): “the focus [has] moved from the student to the professoriate, from general to specialized education, from loyalty to the
Essentially, the humanities have been pushed to the margins, a mere footnote whereby students are taught the tools of reading and writing so that they might perform the “real work” of the sciences. Egéa-Kuehne (2005) constructed the distinction between the humanities and the sciences as one between “obsolete past” and “rational present” … reason is removed from the humanities as well as from the past, and both are relegated to irrationality. Fewer and fewer seem interested in the humanities and their references to an assumed ancient and archaic knowledge. (pp. 134-135)

However, as societies become more focused on controlling the world through science and the “rational present,” notions of humanness, based in the “obsolete past,” become problematic—at worst, impossible. Especially in the present day, where ever-sophisticated technologies play such a central role in daily lived experiences, science and technology are both lauded for their contributions in controlling and defining the world. In turn, as science and technology are privileged in terms of the rational present, they also have become the central epistemologies of modernity. There is an implied effect that the past and the humanities are useless, obsolete.

Technology—especially mobile technology in the digital present—presents a paradox: on the one hand, these ubiquitous gadgets embody the seductive promise of “constant connectivity;” on the other hand, of course, as people become more consumed by these devices, they are being colonized by code-generated simulation, a dehumanizing force never before seen. The emphasis on technology and the overconsumption of information are creating a tension for the human condition – one that is poised to shift from a humanistic era to a posthuman era, and the consequences of this shift will be central to the academy as time progresses. As the grip of research is evermore tightened in the vise of empirical rationalism, students can lose sight of the human experience as it is reduced to the level of statistical significance and, indeed, can lose
sight of the implications of science on daily life. Worse, young people can lose sight of what it means to develop an active sense of agency; along with the reduction of the human experience can come the arrival of passive agency.

The problem, the questions, and the significance

This investigation is focused on three critical questions of modernity: (1) How is technology reshaping what it means to be human? (2) How might an understanding of the shift from the human era to the posthuman era inform subjectivity? (3) What is the purpose of undergraduate education in a posthuman era? In the pages to come, as seen in Table 1 below, I engage with the idea that undergraduate education should emphasize notions of humanness and grapple with the gray areas between the human and posthuman worlds as they emerge, collide, blur, and settle. The role of education should be central during times of radical change, as it provides young people an opportunity to remember what has come before and, in turn, to inform the future. In examining the work of Michel Serres, Egéa-Kuehne (2005) noted “the danger of ignoring the past [and the] risk in repeating it…a colossal waste. One must struggle against forgetting” (p. 133). Ideally, then, the educative experience might be the space in which the struggle unfolds, and that space might help young people navigate the complicated waters of subjectivity regardless of the external forces at play.

Table 1: Defining the focus

<table>
<thead>
<tr>
<th></th>
<th>Humanism</th>
<th>Posthumanism</th>
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<tbody>
<tr>
<td>Historical period</td>
<td>Medieval to Renaissance traditions; roughly 1500 to 1600</td>
<td>Beyond the modern-postmodern traditions; roughly 1900 to 2000</td>
</tr>
<tr>
<td>Key figure</td>
<td>St. Ignatius Loyola (1491-1556)</td>
<td>Jean Baudrillard (1929-2007)</td>
</tr>
<tr>
<td>Significant tension</td>
<td>The navigation between God and man; Ignatian tradition of discernment and finding meaning in one’s life; the development of Ignatian pedagogy</td>
<td>The navigation between man and machine; complications of hyperreality and digital colonization; the proposition of a posthuman curriculum</td>
</tr>
</tbody>
</table>
To illustrate a comparable historical shift, I look to the sixteenth century and the transition from the medieval period to the Renaissance. In that shift, the focus turned from a theocentric (God-centered) worldview to a humanistic (human-centered) worldview. The agent of educational change that I have chosen is St. Ignatius Loyola\textsuperscript{1}, who formed the first global network of education with specific ontological and epistemological assumptions; namely, that man cannot know everything, that there is the unknowable in the universe, and that the study of the humanities is central to the development of personal identity, or “discernment.” Discernment is part of the mystical tradition as defined by Davis (2004):

> The notion of divination – of peering into the realm of the transcendent – bespeaks a particular attitude toward one’s moment-to-moment perceptions of reality. Such perception must be fallible and unreliable, readily deceived if not deceptive. This is the attitude of mysticism, which is an umbrella term that refers to a broad range of perspectives clustered around the belief in a reality that exceeds normal human experience and perceptual capacities. (p. 41)

There is a key tension here beyond the ontological shift that served as a backdrop to Loyola’s time on earth: on the one hand, Ignatius was the head of a religious order of priests, responsible to the Catholic Church; ergo, the work of the Jesuits would have been tied to traditional, rigid Catholic doctrine. However, Ignatius, perhaps influenced by the radical changes unfolding in the contexts of his life, did embrace the mystical experience, and created a new type of Catholicism that emphasized the role of the individual as an active agent in understanding the world, rather than a passive participant who simply received dogmatic instruction from weekly mass at the local church. As shall be explored in Chapter 2, Loyola stood with one foot in the medieval world and the other in the Renaissance, suggesting that the purpose of life was to know oneself and, then, to move towards a closer relationship with God; he balanced tradition (the theocentric medieval worldview) with the “present” (the humanistic Renaissance worldview).

\textsuperscript{1} Born Ignacio López de Loyola in 1491; formed the Society of Jesus (the Jesuits) in 1540; died in 1556.
I argue that today, we are experiencing perhaps the first comprehensively transformative shift since the sixteenth century, and that the underlying current of this present shift is technology. By “technology,” I mean computer technology; that is, code generated / on the screen – whether desktop, laptop, handheld, portable, etc., technology in this sense is especially that which allows us to connect to the World Wide Web. Granted, technology in a general sense is tied to innovation, and is rightly considered as the “stuff” around us, from the wheel through moveable type, right up through stucco, the assembly line and the first home desktop. Heidegger (1954/1977) sought to clarify the question of technology by suggesting that technology should be considered as “…a way of revealing…It is the realm of revealing, i.e., of truth” (p. 12). If we assume from Heideggerian logic that technology is, in fact, a mode of revealing, and if revealing is central to our ontological situatedness via truth, then it is imperative that we strive to understand technology in terms of the simulated experience on the screen, beginning with the World Wide Web.

I theorize that the focus of the current shift is turning from a humanistic worldview to a posthuman\textsuperscript{2} worldview. The critical tension here is severe: in the modern and postmodern 20\textsuperscript{th} century, identity was constructed in terms of possibilities and multiplicities. In the hyperreal\textsuperscript{3} 21\textsuperscript{st} century, as shall be discussed in Chapter 3, identity is limited by homogenization and the radical sameness of simulated technological experience. Furthermore, the modern and postmodern eras were still (as were the eras back to the time of Ignatius and the Renaissance) human-centered; the posthuman, I suggest, shifts from a human-centered to a machine-centered worldview. Also, in a posthuman world, there is an emphasis on information rather than knowledge; humanness is

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\textsuperscript{2} See Chapters 3 and 5 for explorations of the term “posthumanism.”

\textsuperscript{3} Jean Baudrillard (1929-2007) was a French sociologist and philosopher who wrote groundbreaking works on post-structural theory, consumerism, and hyperreality, including \textit{The System of Objects} (1968), \textit{The Consumer Society: Myths and Structures} (1970), and \textit{Simulacra and Simulation} (1981).
problematic as young people move further into the screen and forget the past. It is crucial that the implications of these developments on notions of humanness be explored, and that the role of undergraduate education in light of these developments be reawakened, hence the development of a posthuman curriculum.

I have chosen to title this introductory chapter “between worlds” because, I feel, this is precisely the disconnect with which young people in the early twenty-first century find themselves grappling: traditions of “youth” are becoming more complex with the emergence of hyperreality. Historically, the notion of youth has been synonymous with a process of self-discovery, a time for experimentation and rebellion, a journey towards self-actualization, an opportunity to engage with interstitial ambiguities. However, our hyperreal present is one where ephemerality reigns as the guiding force, where the interstices are saturated by the unfolding drama on the screen (television, computer, smartphone), and where life experiences are reduced to the latest social media status update. In the past, adolescents and young adults were able to spend time engaging with different personas to see where they might be most comfortable: “flapper,” “punk rocker,” “counterculture rebel,” or “hipster.” Today, the very notion of time itself has become problematized, and those multiplicities of identity – those different personas – that once had the benefit of months or years can now be experimented with in virtual spaces simultaneously, through the creation of assorted user accounts across a variety of digital worlds. This can lead to worse confusion than in the past, whereby the embodied young person might find it troublesome to weigh one option fully without being distracted by another; indeed, the critical irony here is that these virtual “options” (in the simulated experiences on the screen) are not “options” at all. They are all simulations – hence the radical sameness of the hyperreal present – as theorized by French philosopher Jean Baudrillard. The process of “finding oneself”
that is, of negotiating subjectivity – is a mystical process, one that requires an understanding
(or, at least, an appreciation) of how individuals affect (and are affected by) the fabric of the
universe around them. It requires time, dedication, introspection, and patient rumination; alas,
our hyperreal present is always moving in accelerated motion. I submit that young people want
to find their place and purpose in the world, but the process is so cumbersome and overwhelming
that they simply give up and dive into their gadgets as a means of escaping the intensity of the
existential crises with which they are faced.

I recognize the limitations of this approach. First, in a historical sense, this investigation
is built on a Western-centric tradition, thereby reasserting Western hegemony in terms of the
“shifts” that are being considered in the movement from medieval to Renaissance and humanist
to posthuman. Second, in choosing these two moments (medieval-Renaissance and humanist-
posthuman), I am privileging the periods themselves by elevating each to a space of radical
importance in the history of humanity, but this is by design. Here is the logic: one of the key
connections that bond these shifts is innovation. In particular, the years between the Middle Ages
and the Renaissance gave rise to the development and production of the printing press in the
mid-fifteenth century. With the arrival of Gutenberg’s machine, the stage was set for the
subsequent information revolution. Prior to Gutenberg, information would have been tightly
controlled by those in power, primarily through the Church and the monarchies of Europe, and
literacy (at least for the masses, who were largely bound by the caste systems of feudalism)
would have been tied to either visual (through “reading” Biblical stories in the gothic stained
windows of the Catholic Churches) or oral tradition (in the spirit of Chaucer’s Canterbury Tales,
etc.). Since the fifteenth century, then, information has been bound by the printed page, through
the life of Ignatius, the Enlightenment, the Industrial Revolution, and into the twentieth century.
However, with the development of hypertext in the late twentieth century, the stage was set for yet another information revolution, but this time, with the promise of egalitarian possibility regarding the control of information, as the foundation of Web 2.0 technologies emphasized the role of user-generated material and a free flowing of ideas. The years between the humanist era and the posthuman era are, in my opinion, still unfolding, hence the choice of topic for the investigation at hand. I have chosen Ignatius to explore the “interstitial intimacies” of the medieval-Renaissance shift, as he created the first global network of education to meet the needs presented by a complicated world. I have chosen Baudrillard to explore the interstitial intimacies of the humanist-posthuman shift, as he was the most prolific author on the sociological effects of a world complicated by simulation and our daily lived experiences in an era of hyperreality. What is missing in the latter shift is an exploration of the implications on the educative process (specifically, on undergraduate education) and curriculum, which is the focus of what I call “a posthuman curriculum.”

A posthuman curriculum might allow young people to engage with the possibilities of new subjectivities within the radical sameness of twenty-first century hyperreality. The significance of this study cannot be overstated: as society embraces the hyperreal experience without teasing apart the threads of significance that underlie the implications of posthumanism on individual and collective subjectivities, the very notion of what it means to be human is at risk. For instance, in a discussion of youth and online gaming, Beavis (2007) said

Young players’ emotional investment in online game play, and the potential for crossover between “real world” choices, judgments, and behavior in their in-and out-of-game worlds, provide a glimpse of the ways in which digital culture flows across on-and-off-line divides, shaping concepts of values, community, and identity that may include, but likely extend well beyond, those experienced in their immediate and physically everyday localities. (p. 61)
Here, we see an outlet (for those who have access) for creativity and autonomy separate from the
bonds of familial, regional, national, or religious expectations, and the new challenge with which
society is faced. It is a challenge that will likely become more complicated in the future – a
binary: identity formation in the “real life” and in the “virtual life.” This code switching of sorts
will be central to the development of young people as they navigate the personas they create for
themselves on the Web and those to which they are bound on earth. The complications involved
in living “normal” lives and the tumultuous nature of the adolescent search for identity are well
known. What is not yet clear is how the added pressures of virtual identities might complicate
adolescents’ navigation of posthuman subjectivities. It is possible that there has never before
been such a collective schizophrenia of hybrid identities, and this schizophrenia is driven by the
influence that technology has on the daily lived experiences of young people. Tapscott (2009)
declared:

There are two critical periods of brain development during which our brains get wired
and developed. The first is early childhood, say from birth to three years old… The
second critical period of brain development occurs roughly during the adolescent and
teenage years… Today’s youth in the United States have access to 200-plus cable
television networks, 5,500 magazines, 10,500 radio stations, and 40 billion Web pages. In
addition, there are 22,000 books published every year; 240 millions television sets are in
operation throughout the country, and there are even 2 million TV sets in bathrooms. (p.
30)

The initial shock of the bathroom revelation notwithstanding, an interesting dilemma is clear:
what is being learned in these spaces and, especially, what is the role of undergraduate education
in the hyperreal present? Jukes, McCain, and Crockett (2010) suggested, “the digital generation,
who are accustomed to the twitch-speed, multitasking, random-access, graphics-first active,
connected, fun, fantasy, quick-payoff world of their video games, MTV, and the Internet, are
incredibly bored by most of today’s education” (p. 22). Here, we have exposed another major
disconnect of the hyperreal present: students are bored with education, perhaps because they have access to a wealth of knowledge, right? Wrong. What students have access to is a wealth of information. The role of the educator in this context should be to help students transform information into knowledge. The process of meaning making should not be difficult when considering young people’s access to information, but difficult it is – or, at least, it seems to be. Perhaps this is traceable back to the notion of neuroplasticity (the theory that speaks to the malleability of the brain, which will be explored in later chapters) and the denouement of attention spans in the classroom. What is implied in this information-rich society is the growing assumption that access should lead to an increase in intelligence. Thus far that does not seem to be the case – a paradox conveyed by Bauerlein (2008): in light of this explosion of information, and in the presence of such access to information, young people in America should be “getting smarter,” but are not. At least not in traditional measures of the term. Perhaps those traditional measures (e.g., IQ scores, standardized test scores, etc.) need to be reexamined. Again, one is left to wonder what is being learned in these virtual spaces, and whether learning is even taking place therein, a notion addressed by Carr (2010): “…as we come to rely on computers to mediate our understanding of the world, it is our own intelligence that flattens into artificial intelligence” (p. 224). Of course, these threads of inquiry are emergent and certainly assume a richer discussion of contexts; throughout this investigation, there are discussions that grapple with contextual implications and seek to shed light on our complicated situatedness at the edge of a paradigmic chasm.

A note on “method”

This investigation is informed by a trifecta of traditions of inquiry: philosophical, poststructural, and historical. I have chosen these traditions because of the dense and, at times, disjointed
elements with which I am grappling. Theorizing about notions of humanness in the space of paradigm shifts is a complex proposal that requires an equally complex discussion, as seen in Figure 1 below. In terms of modernity, it must first be recognized that, in many epistemological traditions, “technology” is not considered a complication. Positivists, for instance, might consider technology as no more than a means to an end – a practical tool of our daily lives to be utilized in search for empirical truths. Technology is, after all, gadgetry – computers, laptops (hardware and software), smartphones, etc., but there are also historical constructs of technology – the wheel, the pencil, the steam engine, and the microchip. However, technology is also all around us in increasingly sophisticated ways, especially via the Internet and the wireless networks that cross the space around our heads, offering instant connectivity to infinite information. Therefore, the void surrounding this positivist frame is mired in existential
limitations, as the very definition of technology is multi-faceted in the hyperreal present. There is a critical tension that permeates paradigm shifts; in keeping with this tension, it seems counterproductive to claim that any single “methodology” would be sufficient. An explanation of the trifecta follows.

First, philosophical inquiry is appropriate because, unfortunately, too often in educational research the disparate forces that affect curriculum are examined through an empirical lens – forced against the complex nature of cultures – into rational models of inquiry based on data collection and statistics. Methodologies that reduce commentary on the human condition to levels of statistical significance should not be central to either the educative experience or to educational research, as dynamic processes of human development and learning are hardly explained by such means. It is a problem that Holma (2009) explored, where there is “the danger of losing sight of the wider context of the phenomenon under study… [and] implies an overemphasis on the gathering of research data without sufficient attention to their interpretation and implications” (p. 325). Instead, as we seek out meaning and the justification of knowledge (which is not to be found in numerical data; numbers, after all, are meaningless in and of themselves), we should look to what Ruitenberg (2009) called philosophy as research… [which] employs a much broader conception of method than its Baconian conception as technique… “Methods” [in this sense] refers to the various ways and modes in which philosophers of education think, read, write, speak and listen, that make their work systematic, purposeful and responsive to past and present philosophical and educational concerns and conversations. (p. 316)

Philosophical inquiry is also well suited as a framework for our multi-faceted hyperreal dilemma, as it requires Holma’s (2009) methodology of “reconstruction,” which seeks “1) to understand the concepts as they are used in this particular context, 2) to clarify the interconnections of these concepts, and finally, 3) to reconstruct the text for understanding and
interpreting it from a new perspective” (p. 327). Moreover, philosophical inquiry should be considered in relation to what Rorty (1979) called edifying philosophy, which is meant “to keep the conversation going rather than to find objective truth” (p. 377). Smith (2009) asserted that edifying philosophy seeks to create an “enterprise of continuing conversations of an educative kind; and not just educative in a general sense, but educative for the particular, quasi-embodied people involved” (p. 438). Especially in terms of examining theory and practice in relation to our hyperreal present as quasi-embodied people who are increasingly tethered to digital technologies, these continuing conversations are essential to allow young people to seek avenues to self-realization and for the development of a posthuman curriculum.

Second, poststructural inquiry is appropriate because, in allowing the myth of reality to be exposed and examined, it allows traditional ways of being and knowing to be teased apart, setting the stage for a critical understanding of our daily lived experiences in relation to modernity. As the guiding questions are explored throughout this investigation, the conversations are structured through a poststructural framework as put forth by Peters and Burbules (2004):

poststructuralism at its broadest level offers a philosophical attack upon the scientific pretensions of social inquiry, including a critique of the very Enlightenment norms that educational research typically prides itself on: “truth,” “objectivity,” and “progress.” … Poststructuralism as a contemporary philosophical movement offers a range of theories (of the text), critiques (of institutions), new concepts, and new forms of analysis (of power) that are… highly relevant and significant for the study of education. (original emphasis, pp. 4-5)

This investigation, then, seeks to hone in on the theories of the past; namely, the shift from the medieval and Renaissance traditions (in Chapter 2) and the shift into the hyperreal, posthuman era (in Chapter 3). The traditions of the current shift will be critiqued in Chapter 4 before moving on to an analysis of new concepts and analysis (Chapters 5 and 6). A major underlying theme of the investigation is the influence of context on the process of understanding subjectivities. In
terms of our hyperreal present, it is important to recognize the influences of technology, as posited by Foucault (1988a):

As a context, we must understand that there are four major types of... “technologies,” each a matrix of practical reason: (1) technologies of production, which permit us to produce, transform, or manipulate things; (2) technologies of sign systems, which permit us to use signs, meanings, symbols, or signification; (3) technologies of power, which determine the conduct of individuals and submit them to certain ends or domination, an objectivizing of the subject; (4) technologies of the self, which permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct, and ways of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality. These four types of technologies hardly ever function separately, although each one of them is associated with a certain type of domination. Each implies certain modes of training and modification of individuals, not only in the obvious sense of acquiring certain skills but also in the sense of acquiring certain attitudes. (p. 18)

From these possibilities, a theme emerges that centers on Foucault’s four technologies, and provides us with a way of examining the human experience in the space of hyperreality (particularly in Chapter 4). In the hyperreal present, where young people use technology as an extension of the self, there is a critical need to help them develop a meaningful sense of identity. A poststructural frame lends itself to this critical need inasmuch as it highlights the possibilities and limitations of language, identity, and power, as proposed by Davis (2004),

all of which are understood in terms of fluid, intersubjective phenomena. Significantly, the main interests of poststructural theorists in these regards are not with the obvious and explicit imbalances among individuals and groups... but the hidden and implicit structures that support imbalances, oppressions, and aggressions among humans. (pp. 139-140)

A poststructural framework is also appropriate because poststructural inquiry in itself (like philosophical inquiry and, ultimately, hyperreality) resists efforts to control it, and exposes threads of complicatedness. Peters and Burbles (2004) suggested

we see a distinctive quality to poststructuralism’s conception of the “aims” of educational research, which are, at one level, to produce knowledge. But what “knowledge” has come to mean and what it means to “produce” legitimate knowledge today are matters that
poststructuralism refuses to take for granted or view simply in epistemological terms. (p. 51)

The production of knowledge, inasmuch as it relates to humanity’s ongoing struggle with meaning making, is typically tied to the influence of time and place; after all, the dominant social, political, economic, and even religious forces of an era – whether consciously or subconsciously – form the foundation of the educative process. Van Goor, Heyting, and Vreeke (2004) illustrated the importance of context by emphasizing “the interrelatedness of justifying knowledge claims and the contexts in which this process takes place” (p. 182). Therefore, if one seeks to understand or justify knowledge in and of itself, then he or she must first contextualize his or her situatedness in terms of the hyperreal present – a complicated task for certain, though one with which scholars have been grappling for the past few decades. Poststructural inquiry is key to scrutinizing hyperreality because it allows us to cast off the myths of progress and reality, just as philosophical inquiry does. Both enable the threads of existential humanness to be teased apart during the search for a critical awareness of agential development and, as discussed in Chapter 6, classroom praxis, vis-à-vis a posthuman curriculum.

Third, historical inquiry is appropriate because it requires a devotion to the understanding of events surrounding the phenomena under consideration. The historical glance backward is also necessary because it influences the work of a poststructural examination. Cormack and Green (2009) proposed, “history as discourse means that no longer can the study of history assume simply or simplistically that there is a ‘reality’ or ‘past’ which lies outside of historical or textual representation” (p. 228). If progress continues in our current uninterrupted arc of hyperreality, it may become apparent that what is made impossible is the very nature of historical and textual representation, as the very concept of time itself, and, indeed, of humanness, are
The loss of the written word, especially in terms of email and social networking, means that cultural representations – vis-à-vis records of daily lived experiences – also means the loss of archival presence. In the end, the implication of our hyperreal present on any inquiry is problematic, as stated by Moran and Kendall (2009):

Let’s try to make this crystal clear: Baudrillard’s work indicates that if as a researcher you attempt to engage with a methodology that can be rigorously applied in order to discover something about education then you are pretty much engaged in delusion, perhaps even professionally so; but this is not because you are using an inappropriate research methodology; instead, you have acted upon an illusion that education exists beyond its simulation, which is fractured, multiple, and discontinuous. (p. 328)

Our situatedness – this hyperreal epoch – is, according to Baudrillard, all illusion. In the face of hyperreality, there certainly cannot be any method of inquiry vis-à-vis notions of humanness that feigns a quantitative, positivist core. A historical foundation is also necessary to consider the complexities of subjectivity, as a critical examination of the influences of the past inform the hyperreal present. Marshall McLuhan’s four idea of the “age of automation” – conceived in the 1960s – has come to life in an absurdly significant manner, and it requires time for reflection and a consideration of what has happened in the past decades so that we might plan our next moves wisely as we move forward.

Furthermore, Baker (2009) challenged historical researchers to consider curriculum “as the ‘cultural studies of education’ with research into overt (formal or written content), hidden (incidental or implied learnings), and null (what could have been taught but was not) curricula taken-for-granted” (p. x, original emphasis). What, then, is found in examining the historical foundations of the Society of Jesus? How did Saint Ignatius Loyola conceive of notions of humanness? What do the historical documents tell us about the Ignatian process of identity?

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4 Marshall McLuhan (1911-1980) was an American media theorist who wrote groundbreaking works on the effects of technology and media influence on the masses including *Understanding Media* (1964) and *The Medium is the Massage* (1967).
formation in the tempestuous sixteenth century? Certainly, if a successful model of helping people was designed during one chaotic period of history, another successful model can be formulated in the chaotic hyperreal present.

In hopes of opening proverbial doors to continuing conversations about our hyperreal present and the threads of significance that weave through notions of humanness in the space of hyperreality, it is clear that discourse should begin with a genealogical analysis of the historical processes which are central to this investigation. Holma (2009) wrote of the process of reconstruction, which seeks “1) to understand… concepts as they are used in… particular contexts, 2) to clarify the interconnections of these new concepts, and finally 3) to reconstruct for understanding and interpreting… from a new perspective” (p. 327). To succeed in a dialogue that embraces the challenge of critiquing the tensions of our dilemma of hyperreality – that is, to build a posthuman curriculum – would be to plant seeds of resistance to the barrage of simulation that inevitably looms on the horizon. In a very real way, the 21st century has given rise to corporations that control the global network and who, in turn, control the panoptic gaze as well, ushering in an era of hyperreal panopticism.5

In terms of the development of a critical, poststructural model of inquiry, Cherryholmes (1988) recommended the following:

A first step… is to describe relationships between historical developments and political practices and curriculum theory and practice… A second poststructural strategy follows from the point that power precedes curriculum discourse… A third poststructural move gives curricular discourse a close reading and analysis… Fourth, what are the dominant and valued categories… Fifth, alternative interpretations of what students have an opportunity to learn should be generated… Sixth, curriculum proposals, demands, and so forth should be examined in light of changes and developments in other disciplines. (pp. 145-146)

Here, attention turns to discourse. Foucault (1971/2010) posited that discourse requires “the old

5 See discussion in Chapter 4.
questions of the traditional analysis… [be] replaced by questions of another type” (p. 3). Again, Foucault’s new questions, inasmuch as they seek to examine language, identity, and power, help shape analysis and interpretations as suggested by Cherryholmes. Sadly, the national curricular discourse of the recent past has focused exclusively on quantitative measurements of student success, grade level equivalences, accountability, and teacher performance with very little (if any) consideration of the issues surrounding the students themselves and their search for meaning in the world. Watts (2008) asked quite provocatively, “If higher education is the answer, what is the question?” (p. 142). If we are unable (or unwilling) to grapple with the questions – that is, if we cannot (or will not) walk alongside young people as they attempt to develop their own identities – then what is the purpose of the educative process itself? This last question formulates the central hope of the pages to come.

The conversations ahead

Again, the focus of this investigation is aimed at the current paradigm shift from the human to the posthuman. To situate the phenomenon historically, Chapter 2 focuses on what I claim to be the last similar paradigm shift, from the medieval to the Renaissance. The medieval worldview was deeply theocentric; that is, intensely focused on God. The shift to the Renaissance, which was deeply humanistic, highlighted a comprehensive ontological rupture. The people of that era were left to grapple with the disconnect between their theocentric traditions and the new humanism that was sweeping across Europe. At the center of that disconnect was the Catholic Saint Ignatius Loyola, who was struggling with the internal discord of the religious conflict caused by the Reformation and Counter-Reformation of the sixteenth century. Loyola decided to embrace both tradition and his modern moment, and created a system of education built upon a mystical tradition of humanism that sought self-awareness and that
would lead an individual to a closer relationship with God. To spread this innovative model, Loyola, through his religious order, the Society of Jesus (the Jesuits), developed the Jesuit schools that spread rapidly, both in Europe and throughout the continents, creating the first global network of education.

Chapter 3 exposes the current shift from the modern and postmodern eras to the posthuman era. More specifically, I posit that technology has heralded a rapid and comprehensive shift in just the past few decades, moving from the postmodern moment—where pluralistic humanisms were central tenets of the ontological fabric of the day—to the posthuman moment, where code-generated simulation has obliterated pluralisms and plunged the population into radical sameness. The theorizing of Jean Baudrillard is central to this conversation, as it was he that first began to tease apart the implications of a consumer society whose main functions centered on the consumption of information and signs, beginning in the 1960s, but in a much more profound way, by the proliferation of computers and technological machines in the 1980s, 1990s, and into the 21st century. Baudrillard suggested that, in a world where simulation governs the daily lives of the people, “reality” is complicated and becomes no longer “real” – it becomes “hyperreal.” Hyperreality, then, is a central consideration for the posthuman moment, and is unpacked in terms of ontologies and epistemologies.

In Chapter 4, I present a poststructural investigation of the systems of governmentality as proposed by Foucault (1988a) to examine the technologies at the center of the current shift into the posthuman era. Foucault suggested four threads that shape subjectivities vis-à-vis technology: technologies of production, technologies of sign systems, technologies of power, and technologies of the self. Technologies of production, whose role is rather literal in the sense of creating or revising objects, will be examined from the lens of those companies who are global
leaders in the computer hardware and software industries. The examination of technologies of
sign systems, which make it possible to create and share systems of meaning and substance, is
treated in light of the global network that governs the flow of information: the Internet.
Technologies of power, inasmuch as it dominates the lives of individuals, is considered through
the communications companies that govern access to the global networks. Finally, technologies
of the self are those that pertain to the individual’s very existence vis-à-vis thoughts and deeds.
In this case, there is a trifecta of industry-specific considerations that fall under the general theme
of young people’s “time on the screen:” (1) media companies (television, magazines, and music);
(2) websites; and (3) gaming companies.

Chapter 5 examines the current state of undergraduate education and teases apart three
central threads of discourse that are key to understanding the limitations of higher education in
modernity: the difference between information and knowledge, the conversation on what it
means to engage in “critical thinking,” and what I call the fatal strategy of online education,
inasmuch as it contributes to the corporatization and commodification of the educative
experience and to the dehumanization of the student. This conversation leads to Chapter 6, which
looks forward to a possible future in light of what some futurists and technology theorists are
calling the “Singularity;” a theoretical “moment” at which man and machine merge. The very
notion of this theory and the effects of it on a possible future creates a space for the emergence of
a new subjectivity: as young people become more colonized by their screens, they become
passive agents and more machinelike. In turn, those young people are objectified by the screen,
and notions of humanness are no longer limited to simply “being human.” In the future, as
machines become “smarter” than individuals, this will also create a new sense of the
unknowable, and in order to be “human,” individuals will have to become more machinelike.
Ergo, the introduction of a posthuman curriculum, which seeks to navigate the complicated waters of technological innovations and the possibility of these new subjectivities. Conclusions and discussion invite a call to action based on the imperative of keeping notions of humanness in curricular discourse in light of a possible future where technology threatens to change traditional notions of humanness, subjectivity, and the educative experience.
The man who would become St. Ignatius Loyola was born Ignacio López de Loyola in 1491 to a family of Basque nobility, into a world that was complicated by the social, political, economic, and religious tensions of the shift between the two key traditions of the era: the God-centered medieval and the Man-centered Renaissance. It was the world of the corrupt Borgia pope, Alexander VI, and Ferdinand of Aragon and Isabella of Castile. Henry VIII of England was born the same year as Ignatius; Columbus would sail to North America the following year. European colonial interests were growing on a global scale. Renaissance culture was spreading north from Italy. The Spanish Inquisition raged. Ignatius himself was 26 years old and a young soldier when Martin Luther, in response to his growing criticism of the corrupt state of the Catholic Church, famously published his *95 Theses* in 1517, giving birth to the Protestant Reformation. Letson and Higgins (1995) noted the world in which Ignatius lived “was marked by huge discrepancies between the rich and the poor, the learned and the uneducated, the powerful and the weak; like ours, Ignatius’s was also a world torn by military conflict and political strife” (p. 2). It is easy to sense why the people of Europe embraced Renaissance culture, as it offered a new celebration of the human experience over what was clearly a corrupt and, in many cases, morally bankrupt religious tradition. In other words, the Renaissance shift offered an attractive alternative to a problematic theocracy in which the people felt less connected and invested as time went on. As shall be explored in this chapter, the work that Ignatius undertook in establishing the Society of Jesus (the Jesuits) during the sixteenth century embraced Renaissance culture and combined it with Catholic tradition, essentially bridging the
two worldviews. The Jesuits would create the first global network of education, an innovative system based on a mystical philosophy that was aimed first at healing the wounds of the sixteenth century rupture within the Catholic Church, and second, at helping people on the journey towards self-discovery, a vocation that Ignatius simply called “saving souls.”

Interstitial intimacy: Ignatius at the crossroads of time

Ignatius was the youngest of thirteen children and was prepared for the life of a soldier, not of a clergyman. From Ignatius’s autobiography, as translated by Young (1956), it is apparent that “up to his twenty-sixth year he was a man given over to the vanities of the world, and took a special delight in the exercise of arms, with a great and vain desire of winning glory” (p. 7). His “spiritual birth” occurred after he was injured at the Battle of Pamplona in 1521, during the Spanish conquest of Navarre. In this battle, Loyola suffered a grave injury, nearly losing his leg to a French cannonball. Though his initial prognosis was poor (at one point, he received the last sacraments), his health steadily improved and he began a protracted convalescence. During those days recovering in bed, Ignatius sought out entertainment through reading; though he was accustomed to fiction and had a particular affinity for tales of knighthood, the only books available to him were religious books. In particular, he was given two books that would change his life: a copy of The Imitation of Christ by Thomas à Kempis and Jacobus de Voragine’s The Golden Legend / The Lives of the Saints. Reading these texts seems to have elicited an intense reaction within Ignatius, as translated from his autobiography by Young (1956):

[Ignatius] was seized with a disgust of the life he was leading and a desire to be done with it. It was our Lord’s way of awakening him as it were from sleep. As he now had some experience of the different spirits from the lessons he had received from God, he began to look about for the way in which that spirit had been able to take possession of him. He therefore made up his mind, which had become very clear on the matter, never to confess his past sins again, and from that day on he remained free of those scruples, holding it a certainty that our Lord in His mercy had liberated him. (p. 21)
Obviously, his experience on the battlefield, followed by his recovery, caused Ignatius to do some thinking about his own life and the life of the Church during this time. Olin (1969) highlighted the late medieval chaos within the Catholic Church:

there were ominous signs of weakness and disorder: the schism resulting from the double papal election of 1378 and continuing down to 1417, the exaggeration of papal power and a concomitant opposition to it both in practice and in theory, the worldliness and secularization of the hierarchy that reached to the papacy itself in the High Renaissance, ignorance and immorality among the lower clergy, laxity in monastic discipline and spiritual decay in the religious life, theological desiccation and confusion, superstition and abuse in religious practice. The picture should not be overdrawn (there were many instances of sanctity, dedication, and even spiritual renewal during this time), but in general, Catholic life in the late Middle Ages seems grievously depressed… (p. xv)

It should also be no surprise that Martin Luther’s anger regarding the state of the Holy See in Rome led to the Protestant Reformation. Undoubtedly, Ignatius knew of the winds of change blowing across the continent; his inspiration and call to action were shaped by the texts of his recovery.

The Imitation of Christ was published in the early fifteenth century and was well known throughout Europe by the time Ignatius was born. Two passages in particular help shed light on the message, as translated by Klein (1943):

Therefore stir thyself to perfection; for in short time thou shalt receive the full reward of all thy labours, and from thenceforth shall never come to thee sorrow nor dread. Thy labour shall be little and short, and thou shalt receive therefor again, everlasting rest and comfort. (p. 51)

And:

The kingdom of God is within you, saith Christ our Savior. Turn thee therefore with all thy heart to God and forsake this wretched world, and thy soul shall find great inward rest. Learn to despise outward things and give thyself to inward things, and thou shalt see the kingdom of God come into thy soul. (p. 59)

Regarding the first, one must imagine that Ignatius, so close to death in those days after Pamplona, must have been contemplating the meaning of life in general and, particularly, his
own role in the world. The essence of à Kempis’s narrative – that the travails of the embodied world are merely temporal and the promise of everlasting rest and comfort are near – illustrate a metaphysical view that was clear to Ignatius. The second passage, though it speaks to the religious experience as well, introduces the role of the individual-with-God, as it explores the inward-outward tension and the movement of God into one’s soul. Especially here, it can be surmised that Ignatius began to formulate the basis for his life’s work, built on a foundation of meditation with an ultimate goal of, first, inner-knowing and second, the kingdom of God. For Ignatius, then, the world is not emergent, as the world “ends” with God, but the process (that is, the journey to the kingdom of God) is not simple. The journey is emergent in a complicated and cumbersome sense – after all, to forsake this world requires toilsome work – but the journey always leads to a fixed destination: eternal life.

From his autobiography, it is apparent that Ignatius, in *The Lives of the Saints*, developed a particular devotion to two people: Saint Dominic and Saint Francis. As translated by Ryan (1993), Voraigne says that, in Dominic, was found “firm evenness of spirit, except when he was moved by compassion or pity; and since a joyous heart makes for a glad countenance, he manifested his inward composure by his outward gentleness” (p. 53). Again, implied here is this balance between the internal and external. For a soldier recovering from a nearly-grave wound, it is easy to imagine the attraction of this notion of the stoic contemplative. It is a model that Ignatius, as a trained military man, would have known well. Ryan (1993) also notes from Voraigne that, during Francis’s lifetime, he convinced many people, of noble and humble birth, both clerical and lay, [to] put away the world’s vanities and [follow] his path. Like a father, this holy man taught them to strive for evangelical perfection, to embrace poverty, and to walk the way of holy simplicity… Francis began with even greater fervor to sow the seeds of the word of God, going about from city to city and town to town. (p. 221)
Ignatius must have been inspired by images of the pilgrim, traveling the world to help people find paths to God, as we know that, towards the end of his recovery, he dedicated himself solely to a life in service to God. When he was able to walk again, Ignatius set out on a pilgrimage himself to the city of Jerusalem. As translated by Young (1956), Ignatius noted in his autobiography an imitation of the saints, walking barefoot to Jerusalem and “eating nothing but herbs… [and seeing himself as doing what the saints had done,] he was consoled, not only when he entertained these thoughts, but even after dismissing them he remained cheerful and satisfied” (p. 10). However, Ignatius also recognized some of his own inner-workings during this trip, as he began to form a critical understanding of the “forces of good” behind his cheerful thoughts and the “forces of evil” that were vexatious to his mind. Thus, Ignatius conceived of the first iteration of his *Spiritual Exercises*, the goal of which was to help people (that is, to save souls) along the journey through life vis-à-vis a mystic summons that seeks to grapple with life’s “big picture” questions. At the center of the *Exercises*, Ignatius proposed a process of discernment, which requires a great deal of individual thought and rumination on one’s position in relation to (and one’s effect on) the world around them as part of the process of creating a religious sphere of being. Discernment, as defined by Gray (2008) consists of “the process of choosing from among many possible goods the specific good that God wants me to choose here and now” (p. 28). Traditional, dogmatic Catholicism would not have made possible the existence of (and, therefore, consideration of) “many possible goods” in the way that Jesuit spirituality was formed; before Ignatius, the Catholic Church would have only considered deference to God and pious living, free from sin, as the one possible good for any member of the faith. After Ignatius, Catholics had an option to explore various possibilities for pious living that were tied to the individual himself or herself – piety that built on the foundation of one’s talents. In other words,
the process of discernment was meant to help someone understand his or her purpose in life with an ultimate aim of eternal life. It is easy to see that this mystical spirituality, inasmuch as it shifts focus from a solely God-centered experience to an individual-with-God experience, presents a critical rupture in the fabric of Catholic history. This “individual-with-God” experience was central to Ignatius’s vision for the Society he would later establish. The discernment process required a “teacher-student” relationship rooted in an introspective and reflective religious experience that might be represented from within (internal), and focused out (external). The model was complicated by historical contexts and poised at a discursive bifurcation between religion and mysticism, but it has endured for half a millennium.

After his journey to Jerusalem, Ignatius, driven by his newfound dedication to God, set out to Barcelona, Spain, where he studied grammar for two years before arriving to study at Alcalá in 1526. By then, Ignatius had developed his program of discernment in the *Spiritual Exercises* and began offering guidance to others who were seeking salvation through the inward glance. He attracted a few companions between the universities at Alcalá and Salamanca in Spain, where Ignatius and his followers, while attempting to recruit people to participate in the *Spiritual Exercises*, were mistaken for “alumbrados”⁶ and were imprisoned for a short time. After his release from prison at Salamanca, Ignatius realized that his ministry required a more educated mind, for it was only through erudition that he and his companions would not be mistaken for heretics, and thus he made way to Paris, where he planned to study once again. It is noteworthy here to recognize the importance that Ignatius placed on learning as a means of improving one’s position in life. Ignatius clearly lived at a time of great social, political, and religious upheaval; in this transitional period, ontological discourse rested firmly within a

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⁶ *Alumbrados* were Spanish Christian mystics who were persecuted during the Inquisition.
metaphysical, gnostic frame. Regardless, it was Ignatius’s own experiences that highlighted (1) the need for self-awareness and (2) the importance of secular learning in order to help others achieve that self-awareness. In other words, in a world where there were countless souls to save, being an “educated” person was crucial to the process. Communication and an understanding of the cultures in the towns and cities in which he worked were required to achieve Ignatius’s goals. This realization not only helped Ignatius develop a sense of agency, but would also be a major force in shaping the mission of his Society in the years ahead.

Ignatius reached Paris in 1528, where he enrolled at the College of Montaigu (part of the University of Paris) to study humanities. Montaigu was a place of innovative pedagogy, where Renaissance humanism had been embraced and was flourishing. Farrell (1938) noted the serendipitous forces that influenced Ignatius in his time in Paris:

A reading of the history of the University [of Paris] discloses the fact that by 1517 the humanist movement had after much resistance taken root in Paris, though more solidly in some colleges of the University than in others. The rule of Standonck, which governed the Collège de Montaigu, contained some few elements of the new humanistic manifesto; but it was at Sainte-Barbe that humanism found its most fertile soil… between 1525 and 1530 the aim toward which the new movement and its protagonists had so long aspired was finally attained: genuine classical teaching was established in all the chairs of the college. The date is important. For Ignatius passed from Montaigu to Sainte-Barbe in October of 1529, remaining there three and a half years. Hence he witnessed the final phase of the change from the old to the new education, which was in a sense the transition from Medievalism to the Renaissance. (p. 31)

The “rule of Standonck” of which Farrell speaks deserves discussion. Jan Standonck (1453-1504) was a Dutch priest who spent much of his life working in Paris. He was appointed head of the Collège de Montaigu in the 1480s, and was largely responsible for initiating the humanistic curriculum at the college – a paradigmic rupture in itself. He also was a teacher of several Renaissance-era innovators and “thinkers,” including Erasmus, Loyola, and John Calvin. Again, it is obvious that Ignatius had the benefit of time and place, as he was exposed to radical thinking
in ways not seen for centuries prior. Ignatius remained at the University of Paris until 1534,
when he earned a master’s degree at the age of 43; after completing his studies, Ignatius, along
with six companions, atop Montmartre in Paris, unofficially convened what would become the
Society of Jesus. Over the next few years, Ignatius and his companions continued to guide
followers through the *Spiritual Exercises*, while he himself worked on writing the *Formula* for
the Society, which established the rules of the Order. The men arrived in Rome by 1538 to offer
their services to Pope Paul III, whom Ignatius petitioned to formally recognize the group; finally,
in 1540, through the Papal Bull *Regimini militantis Ecclesiae*, the Order was established.

Five years later, in 1545, the Pope convened the Council of Trent to officially address the
need for reform in the Catholic Church in light of the dissention caused by the Protestant
Reformation. It is unlikely that Ignatius could have known it then, but Trent would serve to
solidify the work of the Jesuits as Catholic educators in the “Counter-Reformation tradition.”
Appropriately, suggests Olin (1969), the term lends itself to scrutiny, as we consider what is
“reformed”:

> the original concept of Christian reform is one of the reform of the individual – of his
personal renewal and the restoration in him of the image of God, the *form* of his
creation… The institution per se does not reform itself but is reformed by men who are
reformed. In this sense the Church needs saints, that is, men who truly are reformed and
whose example and efforts are the means for further reformation. (pp. xviii-xix)

In other words, the Fall of Man is replayed in these dark days of the Church. Mankind was
formed in the image of God, but (by the fifteenth century, certainly) had become corrupted.
Therefore, it is the individual himself or herself who needs to be reformed – hence the
“reformation.” Once the individual reformation takes place, those who are renewed can
undertake the work of improving the institution (the Church). Of course, as Olin noted, the work
of institutional reform requires the leadership of individuals who are themselves models of
spiritual conversion and piety. Janelle (1951) hinted that the work may have been accomplished by a small group of dedicated individuals, “Devotion, sacrifice, enthusiasm… [but] also a feeling of deep remorse for what had been wrong in the past… if men had only looked backwards, had only attempted the re-enforcement of the old rules and canons…” (p. 33). In terms of the dedicated individuals on both the Protestant and Catholic sides of the Reformation and Counter-Reformation, the main agent of change that was embraced was education, as stated by Bireley (1999), “Few historical movements have taken education as seriously as the Catholic Reform or the Protestant Reformation. Both Catholics and Protestants saw the school as a principal instrument of inculcating the Christian message, and both realized the need to win over youth” (p. 121). As stated previously, Ignatius quickly learned the value of erudition in his own days as a student traveling through Spain. Entering the university at the crossroads of the medieval and Renaissance traditions, he would have been exposed to various curricula, teaching styles, and overall experiences; he was a man who arrived at the classroom later in life than most, but he was determined to complete the program of studies. As the years passed and Ignatius realized how central a role education would play for his fledgling Society, he began to further hone his plan for education. It should be noted that originally, Ignatius intended to build schools primarily for the training of men who were becoming members of the Society. It was only after his death, and after the last sessions of the Council of Trent, that his followers understood the expectations placed on them regarding the extent of the Jesuit mission in educating extern students. There are two primary documents that chronicle Ignatius’s rules on education and that would eventually comprise the plan for Ignatian pedagogy: first, the *Constitutions* (the rules of the Society), written by Ignatius himself, and the *Ratio Atque Institutio Studiorum Societatis Iesu* (“The Official Plan for Jesuit Education”), more commonly referred to as the *Ratio Studiorum*, written
and revised in the decades after his death and finally approved in 1599.

Donohue (1963) aptly stated, “Education is usually thought of either as a process or as a product” (p. 87). For the tradition of Ignatian pedagogy, there is much to say on each of these ends, and before moving on, a few general points are necessary. First, Ignatius was a master of crafting process out of the chaos around him, not least of which was the major epistemological shift occurring on the European continent. Scaglione (1986) constructed the tension as “the psychological and moral contrast between the humanistic optimism about the dignity and nobility of man on the one hand and, on the other, the medieval pessimism about human nature” (p. 26). Obviously, to navigate this divide, Ignatius chose the members of his Society as his instrument of hope for humanity. Put differently, Ignatius built his schools from an idea that Davis (2004) identified in terms of, “teaching [as] a vocation – literally, a divine calling” (p. 59). This is a key intersection: the notion of teaching as vocation (a divine calling), but teaching within the mystical process of discernment, which in terms of Counter-Reformation “new Catholicism,” problematized traditional assumptions of the religiosity of the Order. In uncritical terms, the Jesuits engaged in pedagogy that assumed its members would know when to be the “sage on the stage” (the Jesuit priest) as opposed to the “guide by the side” (the Jesuit mentor). The roles are interchangeable, but different, as the priest performs religious duties and preaches, while the mentor guides the inward glance of discernment.

Second, the historical documents show that Ignatius had a comprehensive vision for the work of his schools. In writing to Antonio Araoz about the Jesuit ministry of education in 1551, Ignatius penned (as translated by Palmer, Padberg, and McCarthy, 2006):

First of all, those who teach make progress themselves and learn a great deal by teaching others, acquiring greater confidence and mastery in their learning… Persons who are poor and unable to pay the ordinary teachers, much less private tutors at home, here
obtain gratis an education which they could hardly succeed in obtaining at great expense... The people of the country have in our men persons to inspire and aid them in undertaking charitable works such as hospitals, houses for reformed women, and the like, for which charity also impels our men to have a concern. (pp. 362-363)

By 1551, a handful of Jesuit schools had already opened, but Ignatius was still refining the model. He knew that, to begin with, the massive undertaking of education would require a large workforce, so Jesuit institutions had to focus first on its own members before anything else. He also knew the value in avoiding the complication of money in his schools, most likely the result of an overcautious consciousness in thinking back to the corruptions of the fourteenth century in the Church; also, however, was the simple desire to “save souls” regardless of their pedigree or social position. Finally, to the business of saving souls, he understood the value that his schools could add to the communities in which they operated. By 1556, Ignatius had standardized the message to those who were venturing out into Europe to start schools, as seen in a letter (by commission of Ignatius) from Juan de Polanco to the Jesuits beginning the college in Prague, as translated by Palmer, Padberg, and McCarthy (2006):

Three aims should be pursued in Prague. The first is the edification of the city and realm. The second is the preservation and growth of our own men in spirit, learning, and numbers. The third is working toward the permanent material foundation of the college, for the better service of God our Lord in the first and second aims. (p. 634)

This message is copied nearly verbatim to those establishing colleges in Clermont, France, and in the Bavarian city of Ingolstadt, in 1556. It is amazing to recognize the speed with which this global network was formed and formalized, as seen in Figure 2 below.

Third, once the schools were established, of course, the Jesuits turned to the guidance of the Ratio Studiorum, which will be discussed in more detail later in this chapter. McGucken (1932) posited that the Ratio does not present “a pedagogical treatise nor a theory of education. It merely mirrors, by way of rules, the methods and practices of Jesuit educational establishments...
of the sixteenth century” (p. 34). The utilitarian benefit of the Ratio served to help the fledgling schools flourish under the united banner of the Society.

![Map of the spread of Jesuit missions & schools, 1540-1640](https://en.wikipedia.org/wiki/File:A_large_blank_world_map_with_oceans_marked_in_blue.PNG)

Figure 27: Spread of Jesuit missions & schools, 1540-1640⁸ (present-day political boundaries)

The discerning soul, then, was the ultimate product of Ignatian pedagogy, or what Ganss (1956) called the “well-rounded concept of educating the whole man to natural and supernatural virtue” (p. 175). Put differently, McGucken (1932) claimed, “The aim of the Jesuits was not the control of the temporal powers of the world but of those inner forces that make up human life” (p. 10). The recurring themes here are unmistakable: discernment, pedagogy, the inward glance, education, the Jesuit motto “ad majorem Dei gloriam”⁹, the magis¹⁰, and the cura personalis¹¹…

The Jesuits were the epitome of the Christian humanists, and their global successes during the first century of the Society illustrate the transformative force they had on the societies in which they were established. Perhaps these successes were simply the result of a Counter-Reformation thirst for the promise of new Catholicism, but the power of Ignatian pedagogy, as discussed later in this chapter, should not be overlooked, as it was certainly attractive to populations who were

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⁷ The source file of the map image used throughout this document is licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license, and can be accessed at: [http://en.wikipedia.org/wiki/File:A_large_blank_world_map_with_oceans_marked_in_blue.PNG](http://en.wikipedia.org/wiki/File:A_large_blank_world_map_with_oceans_marked_in_blue.PNG)

⁸ The growth of the Jesuits as represented in this figure is taken from accounts chronicled by Bangert, W.V. (1972). *A history of the Society of Jesus*. St. Louis, MO: The Institute of Jesuit Sources.

⁹ *Ad majorem Dei gloriam*: Latin for “For the greater glory of God.”

¹⁰ *Magis*: Latin for “more,” as in “What more can I do to help others and to find God?”

¹¹ *Cura personalis*: Latin for “Care for the entire person,” this is a cornerstone of the Jesuit identity and plays a crucial role in the Ignatian tradition of holistic education.
embracing the critical epistemological frames of the Renaissance. Donohue (1963) noted:

the true source of vitality in Jesuit education is indicated by the answer to a why rather than a what. That is to say, the Society’s enduring purposes and motives in conducting schools are the forces that have made it possible to sustain this work across space and time. If an educational theory did no more than answer questions about curriculum and method, the schools built upon it would inevitably become obsolete and perish. For these factors, by their very character, depend considerably upon a determined cultural epoch and do not contain within themselves the sources of that living spirit which enables an institution to survive. The secret of vitality and continuity must be sought at a deeper level. (p. 9)

By focusing on “why” rather than “what,” the complicated questions with which the Jesuits engaged have endured. Ignatius knew of the importance of adaptability; he embraced the challenges presented by temporality by leaving his Society no delusions of fixed rigidity. For Ignatius, the ultimate goal – that is, the realization of one’s soul – was a timeless pursuit. Therefore, he recognized the need to do whatever the era required to achieve this goal.

Ignatius was a visionary whose foresight and scope were inspirational, but his schools were often under attack in those formative years near the beginning of the Society. Palmer, Padberg, and McCarthy (2006) translated a letter from Ignatius to Juan de Polanco from 1547 in which he says:

We have the reputation, particularly in Rome, through certain persons who miss the truth, of wanting to rule the world. And should Mattia, the papal postmaster, or some of his followers in ignorance have passed through Florence, it would not be surprising if they spoke against us to the duke, and this may have contributed to further undoing the greater service of God our Lord. (p. 158)

Even in those early days, not even a decade into the Jesuit experiment, it is apparent that Ignatius and his followers were treated with various degrees of skepticism. As the Society grew and spread throughout the globe, and especially with the rise of the schools, the Jesuits were even bigger targets for its enemies, not the least of which were rival schools in the towns and cities where the Society was established. According to Farrell (1938), one competitive local
saw that the success of the new college was not only jeopardizing their long-standing supremacy in the domain of grammar-school education, but actually was robbing them of large numbers of pupils. They took prompt and ruthless action. At first they attempted to discredit the school by spreading accusations of heresy and of incompetence. Failing in this, they resorted to methods of hooliganism, bringing bands of their students to break the windows of the college and to create such a disturbance that the classes had to be adjourned. But their attacks in Rome as in other towns of Italy where the Society opened colleges, while causing some inconvenience for the moment, eventually enhanced the reputation of the school by calling attention to its curriculum and methods of teaching. (p. 66)

After all, it stands to reason that the local populations would take notice if established schools were going to such great lengths as to bring bands of students marching in protest to these curious new schools. The questions seem obvious: what was going on at these Jesuit schools? Why were they attracting so many students? Why couldn’t the traditional schools compete? What was so appealing about this new curriculum? When it comes to educational systems, the resistance to change that we see in our contemporary world is clearly not a new phenomenon.

The Catholic emphasis on education was a theme teased out over the years of the Council of Trent, but in the beginning, it appears as though Ignatius approached Trent with reserved apprehension, as detailed in his 1546 letter to the three Jesuits (Fathers Laínez, Salmerón, and Jay) who attended the meetings. As translated by Palmer, Padberg, and McCarthy (2006):

For dealing with others… I would be slow to speak, deliberate and loving, particularly when expressing a judgment on matters that are or might be treated at the council… In discussions of these or other topics, I would mention arguments for both sides, so as not to appear attached to my own judgment, taking care not to leave anyone annoyed… In preaching, I would not touch upon any points where Protestants differ from Catholics; I would merely exhort to virtuous living and to the Church’s devotions, urging souls to thorough self-knowledge and to greater knowledge and love of their Creator and Lord. I would frequently mention the council and, as indicated above, conclude each sermon with a prayer for it. (pp. 128-130)

Here, one sees the caution with which Ignatius approached this event, likely the results of his
years as a pilgrim and knowing how easily one can be misunderstood and imprisoned. However, it is also interesting to note some of the implications of Ignatius’s directions. Namely, the call to “mention arguments for both sides” and the “urging souls to thorough self-knowledge,” both of which project directly into the pedagogy that the Society would adopt in the following decades.

By the end of Trent, in 1563, though after the death of Ignatius, the Jesuits were named the preferred Order for the education of Catholics worldwide. The work of the Catholic Church in general (and, particularly, that of the Jesuits) during the Counter-Reformation served to revive what was a metaphorically dying patient. The corruptions of the fifteenth century were shunned in favor of hope and optimism, built on the promise of new religious orders, with the Jesuits at the forefront. As Janelle (1951) noted, the work “opened schools, colleges, universities; it helped in the study of native languages, of native art and culture, and opened out wide fields to historical and geographical scholarship… In a word, it… gave its full significance to the discovery of new continents” (p. 333). The sixteenth century was certainly a time of great transition; Ignatius was at the center of global growth, an innovator attempting to pay homage to the denouement of one era while giving credit to the next, what Scaglione (1986) called “a ‘modern’ foundation of the Christian heritage” (p. 3). The model clearly worked. Through time, the Jesuits contributed in countless ways to the intellectual and cultural discourses of societies, from Francis Xavier’s early travels to Asia and Indonesia to Kircher’s seventeenth century study of Egyptian hieroglyphics and monumental work, the *China Illustrata*, through the spread of schools, colleges and universities into the nineteenth and twentieth centuries. The Jesuits were masters of ethnographic work and wrote vociferously in their travels, engaging with thick description hundreds of years before Geertz coined the phrase. They were known to be prolific letter writers, documenting their successes and failures, their triumphs and tragedies, especially
in epic works like the *Jesuit Relations*, the *Monumenta paedagogica Societatis Iesu* and the *Monumenta Historica Societatis Iesu*.

**Ontology & Ignatian humanism**

For Ignatius, “being human” required a dynamic process of movement; that is, the inward glance followed by the outward action. The main ontological foundation of Ignatian humanism is discernment, which rises from the notion that man cannot know everything and that there is the unknowable in the universe. Discernment, inasmuch as it is focused on the saving of souls, is a process rooted in a mystical summons to recognize one’s full potential. In unpacking the process of discernment, it is essential to recognize the underlying current of mysticism in the method and address the tension therein.\(^{12}\) Again, in terms of “being,” Ignatius walked a fine line in the gnostic tradition between religion and mysticism, but walk it he did, and quite successfully. He knew very well the implications of tending too far outside the appropriate boundaries set by the Church from his imprisonment at Salamanca when he was mistaken for an alumbrado. It stands to reason, then, that he would have worked to ensure his *Spiritual Exercises* were sufficiently Catholic; nonetheless, the mystic tradition is clearly apparent. De Nicolás (1993) suggested, “Mystics are masters at showing the steps leading to the building of… human interiority and give light and meaning to ordinary acts” (p. 37). Particularly interesting is the notion of “giving light” – Ignatius would certainly have presented discernment as a means of “receiving the light of Christ” to the exercitant. Put differently, individuals who engaged in the exercises would have been working towards finding Christ in the ordinary acts of their daily lives. Again, the implications of this individual-with-God approach are significant, as claimed by Davis (2004):

The tensions between religions and mysticisms are actually more matters of common

\(^{12}\) It should be noted here: if discernment is the process, then the *Spiritual Exercises* contain the method; this will be explored in further depth later in this chapter.
assumption than of incompatibility. For the most part, mystic and religious zealots alike regard truth as a fixed and unchanging thing. They part company on the issue of who is allowed to go in search of divine truths. The mystic tends to regard the matter in terms of personal right and obligation, the religious adherent as a matter of God’s priority and discretion. (pp. 48-49)

Here is what might be called the crux of the Ignatian paradox: if, in a religious sense, we are to rely on God’s priority for finding ourselves in our time on earth, then why propose such a process like discernment, which places agency in the hands of the individual? Why the inward glance towards the soul (which, in previous religious tradition, was known only to God)? De Nicolás (1993) suggests that, in terms of mystical training, “Ignatius is our best guide” (p. 38).

The Spiritual Exercises, then, reflect Ignatius’s own journey to finding himself (of course, in finding his way to God) through discernment. Davis (2004) noted

Within almost all mystical traditions, there are rigorous systems of discipline (from the Latin, discere, “to learn”) that are intended to enable devotees to cultivate their intuitions and, in the process, reacquire some measure of unity with the universe… The goal is to diminish the din of moment-to-moment thought, to allow oneself to attend to thoughts that are not anchored in immediate, earthly concerns. (pp. 52-53)

The Spiritual Exercises certainly represents a rigorous system of discipline, and again, seeks to empower the individual exercitant with the ability to cultivate his or her intuitions. What was likely most attractive, however, was the opportunity for one to break away from those “immediate earthly concerns” in search of one’s soul. As far as religious dogma and practice go, the Ignatian process of discernment is nothing if not empowering. In the early days of the Society, it seems as though Ignatius recognized the pressures placed on the shoulders of the Order. From his letter to the Jesuits at Coimbra in 1547, as translated by Palmer, Padberg, and McCarthy (2006), we learn that Ignatius embraced these pressures with steadfast resolve:

I can assure you that you must make enormous strides in studies and virtue if you are going to come up to the expectations that so many people have of you, not just in your own kingdom but in many other regions as well – persons who, when they see what helps
and advantages of every kind, both interior and exterior, God gives you, justifiably anticipate a quite extraordinary result… you are to make yourselves a continual sacrifice to the glory of God and the salvation of the neighbor, towards which you are to cooperate not just by your example and earnest prayers but also by the other outward means ordained by his divine providence for our helping each other. From this you can realize what a noble and royal way of life you have taken up: for not only among human beings but even among angels, there is no nobler activity than that of glorifying their Creator and bringing his creatures back to him to the extent of their capacity. (pp. 166-167)

Within the first decade of the founding of the Society, then, Ignatius told his followers of the great expectations placed on the group as they worked to help people discover “their capacity.”

In the context of the Renaissance / Counter-Reformation, it is easy to assume an overwhelming thirst of the faithful who would have been longing for such pious inwardness. Discernment through the *Spiritual Exercises* must have, in those early years, been more successful than Ignatius could have dreamed.

To begin examining the *Spiritual Exercises*, once again, the image of the convalescing soldier Ignatius comes to mind, as this was where the notion of saving souls was first born.

Interestingly, while reading Voraigne’s *The Lives of the Saints* as translated by Ryan (1993), this passage on Saint Francis stands out:

> He became a merchant and, until he was twenty years old, lived a vain and frivolous life. The Lord chastened him with the whip of ill health and quickly made a different man of him, and he began to exhibit the spirit of prophecy. (p. 220)

Naturally, Ignatius would have connected with this depiction of a young Francis, who, like Ignatius, would have spent his youth in vanity. Of course, Ignatius would have been reading this during his own recovery from ill health, thus leading to a very literal connection with Francis, but what’s important here is to note the cause. Perhaps Ignatius, while reflecting on the text, may have interpreted his bad luck on the battlefield as a sign from God. And, if that were the case, perhaps it was in the spirit of repentance that Ignatius set out to find himself – the beginning of
the proverbial snowball rushing downhill. Ignatius’s second inspiration in Voraigne was Saint Dominic, regarding whose birth Ryan (1993) translated:

> when Dominic’s godmother lifted him from the sacred font, it seemed to her that he had on his forehead a brilliant star which shed its light over the whole world… Dominic began to think about establishing a religious order whose mission it would be to go from place to place, preaching and strengthening the faith against heretics. (pp. 45-46)

For those familiar with Jesuitica, this passage too holds special significance. Ignatius was known for telling his followers to “go forth and set the world on fire.” Though the literal connection here may be lost in translation and to the ages, the message is the same. Perhaps, in light of this passage, it is possible to surmise that Dominic may have been the inspiration behind Ignatius’s global vision.

Also, in *The Imitation of Christ* is found more language that informs the Ignatian tradition of discernment. Thinking back to the influence of the historical shift from the Middle Ages to the Renaissance – that is, from a theocentric to humanistic worldview – it is clear that Ignatius was able to form a basis for the personal relationship with God. In this sense, à Kempis may have been influenced by Renaissance thinking earlier than others in northern Europe, writing the *Imitation* in the first two decades of the fifteenth century. As translated by Klein (1943):

> the eye is not satisfied nor fully pleased with the sight of any bodily thing, nor the ear with hearing. Therefore study to withdraw the love of thy soul from all things that be visible and turn it to things that be invisible; for they that follow their sensuality hurt their own conscience and lose the grace of God. (p. 4)

à Kempis tells the reader to forego assumptions about counting on the embodied experience on Earth, warning that one should not trust one’s senses, as doing so causes a fall from grace. Instead, à Kempis implies that through the process of the “invisible” (read, discernment), one is able to break the chains of the natural world and, through the supernatural experience of the
fulfillment of the soul, reach out to God. Finally, to the notion of the individual-with-God in à Kempis, Klein (1943) translated, “Speak, Lord, for I thy servant am ready to hear thee… give me wisdom and understanding to know thy commandments. Bow my heart to follow thy holy teachings, that they may distil into my soul as dew into the grass” (p. 94). The aura here is of a two-way conversation between the individual and God, where God speaks to the soul – a mystic summons to know oneself in the image of God. Again, it seems obvious that passages like this were largely influential in Ignatius’s creating the exercises.

There is another reported influence on the *Spiritual Exercises* that warrants mention – a monumental work of nearly 800-pages written by Ludolph of Saxony in 1374 – the *Vita Christi*, or *The Life of Christ*. It is clear that Ignatius engaged with this text at some point in his life, probably also during his convalescence, though the degree to which it can be counted as an influence is debated by Ignatian scholars. Regardless, there are significant similarities. According to Shore (1998):

> Both [Ludolph and Ignatius] viewed their encounter with Christ as a personal experience, one that directly affected the individual without contradicting or superseding the sacraments of the institutional Church that was so sacred to both of them. Both saw solitary, sincerely felt prayer as a crucial means of establishing contact with God. And both recognized the importance of communicating their understanding of the divine through means easily understood by persons of all backgrounds. (p. 4)

There is a noteworthy implication here. If, as Shore implies, Ignatius had found in the *Vita* an emphasis on universal communication, then the influence of Ludolph’s work may have been more central than some might like to suggest. After all, in forming the mission of his Society, Ignatius stressed the importance of learning the vernacular language and customs of the places where work was being done. Clearly, this was to ensure better success in “saving souls,” but agenda aside, if we do count the work as an influence on the Society, Saxony could have
contributed to one of the most lasting aspects of the work of the Jesuits. In addition, Shore (1998) noted that Ignatius built on the *Vita*’s “call to imagine,” which requires in the exercitant “far more than simply creating a mental picture of the event or circumstance: it requires powers of concentration and meditation capable of bringing to life the humanly comprehensible incidents in the life of Christ” (p. 9). This is reminiscent of the soldier’s code – of “spiritual boot camp” – intense reflection and imagining in an effort to experience growth of the soul. In the end, it would be a surprise if Ignatius had not been influenced by the *Vita*.

Furthermore, it is also a safe assumption to propose that Ignatius might not have experienced his spiritual awakening at all had it not been for à Kempis and Voraigne. As noted by Shore (1998), in 1522, Ignatius first began “to write down in a notebook details of his experiences of prayer and his reflections thereon” (p. iii). The text was completed by 1541, but was not officially approved by Rome until 1548, when Paul III issued the Bull *Pastoralis officii cura*, recognizing the text as an authorized Catholic manuscript. In the exercises, Ambruzzi (1934) pointed out, “The highest interests are involved: the interests of our soul, of God’s glory, and of other souls, because our deeds, good or bad, vibrate all around and influence our fellowmen” (p. 1). Also, Bireley (1999) asserted that, in the exercises,

> the individual is led to see his own life within the context of the salvation history of humanity. The goal was two-fold: first, to introduce the retreatant to a life of prayer and then to help the retreatant to determine his vocation or choice to which God was calling him in the service of his kingdom. (p. 31)

There is a key implication here: that of individual responsibility. This is a notion of God very different from that which is implied in predestination. In no unclear terms, Ambruzzi and Bireley suggest that Ignatius places the important work of salvation in the hands of the person – that through discernment (the exercises) and through the formation of the soul – one is personally
capable of understanding one’s place on earth. If this positive end is possible, then it seems obvious that the opposite is true as well, that by not exploring the essence of one’s soul, one will never come to understand one’s place on earth.

What is contained in the text of the exercises itself? Ignatius wrote, as translated by Puhl (1951),

By the term “Spiritual Exercises” is meant every method of examination of conscience, of meditation, of contemplation, of vocal and mental prayer, and of other spiritual activities that will be mentioned later. For just as taking a walk, journeying on foot, and running are bodily exercises, so we call Spiritual Exercises every way of preparing and disposing the soul to rid itself of all inordinate attachments, and, after their removal, of seeking and finding the will of God in the disposition of our life for the salvation of our soul. (p. 1)

Notably, Ignatius claims that the exercises are to be considered as a universal method towards knowing oneself. Here, the exercises seem to be designed as one would imagine a former soldier might conceive them, again, back to the notion of a sort of “spiritual boot camp” – akin to physical exercises – on the journey toward self-actualization. Only once the extraneous, worldly attachments are stripped away can one move closer towards salvation. In this sense, it is no accident that Ignatius uses the notion of “exercises” to describe the process. It takes ascetic willpower and determination to complete the training. After completing the routine (hopefully with a critical understanding of oneself), one might become a contemplative in action.

Later, Ignatius emphasizes the need for one to care for the people in one’s community, as noted by Puhl (1951), “if one has knowledge, he shares it with the one who does not possess it; and so also if one has honors, or riches. Thus, one always gives to the other” (p. 101). This is a key theme for Ignatian spirituality: magis, or “more.” In other words, as taken from the motto of the Society, “ad majorem Dei gloriam” (for the greater glory of God), one must always ask what more one can do both for people and for God. In effect, students of the Jesuits are expected to be
“for others,” meaning that, after one has discerned the meaning in one’s soul, one should do everything in one’s power to make life better for the individuals in one’s community as well.

Also, from Puhl (1951), we read:

> We should not make it a habit of speaking much of predestination. If somehow at times it comes to be spoken of, it must be done in such a way that the people are not led into any error. They are at times misled, so that they say: “Whether I shall be saved or lost, has already been determined, and this cannot be changed whether my actions are good or bad.” So they become indolent and neglect the works that are conducive to the salvation and spiritual progress of their souls. (p. 160)

Ignatius reminds us that we have free will. This should not come as a surprise to those who remember the life Ignatius led before his awakening. Recall his life as a soldier, given up to the vices of the world, and his subsequent convalescence in which he was converted, and dedicated his life to the church. Had Ignatius adhered to the notion of predestination, it is likely that he would have reflected on his life before his injury and simply claimed that his was a hopeless case, that he was destined for a life without hope, without salvation. Naturally, then, Ignatius would have been an optimist in terms of the fate of humanity; this logic would have fit well within the ideals of Renaissance humanism.

To further illustrate the merging of worldviews, Janelle (1951) called the *Exercises* “the exercise of the intellect and imagination, [which] is made to take effect at once in the exercise of the will. In fact, the whole trend of St. Ignatius’s teaching is directed towards a strengthening of the will” (p. 125). Again, the notion of will and soul and, more than that, the idea that one has a summons to engage both, drips of the mystical tradition. De Nicolás (1993) stated:

> To be a mystic is to live on memory… Through memory they, the mystics, set the will of the origin – God, the gods, forces, energies – into motion… Memory mediates all human action: it is human language, and it is also divine manifestation. Images in memory become the starting point of meditation proper. (p. 41)

It is easy to see in the mind’s eye an image of the convalescing Ignatius, contemplating his own
fate, finding inspiration in the works of à Kempis and Voraigne (possibly in Ludolph of Saxony),
before his awakening. During the years that Ignatius sought education at Alcalá, Salamanca, and
Paris, and following that, in the formative years of the Order, he was quietly meditating on his
purpose in life – bolstered by divine manifestation – as he lay the groundwork for his followers;
but his was dangerous work, as he straddled the ruptured worlds of the middle ages and the
Renaissance, of the Reformation and the Counter-Reformation. Davis (2004) indicated:

Both mysticism (divined knowledge) and religion (revelation) posit a transcendent unity.
Mystical traditions generally discuss this unity in terms of a divinity that is pervasive,
manifest in everything – or, in some versions, everything manifest in it. Religions, by
contrast, more commonly frame transcendent unity in terms of binary dualisms… In
formal terms, that is, mysticisms tend toward pantheism, religion toward theism. For the
mystic, the focus is on deep intertwinnings, knowledge of which must be carefully sought
out. For the religious adherent, knowledge is given, not discovered. (p. 48)

Especially in light of the latter part of this passage, it is clear that Ignatius may have been more
conflicted than history has told. The idea of the religious adherent suggests that knowledge is
given to a waiting recipient – there is no process through which discovery is possible. If this is
the case, make no mistake: Ignatius was a mystic. It is essential to understand the emphasis that
Jesuits place on discernment, the underlying current of significance here being the metaphysical
ontology, gnostic by nature, but that is complicated by the intersections of religion and
mysticism. The *Spiritual Exercises* were meant to help people with the inward glance – to help
answer those perpetual questions including “Who am I?” and “What is my purpose on earth?” To
this end, the *Exercises* should be seen as a sort of field guide for the journey to one’s soul, a
spiritual road map that was designed to help the Jesuits assist others on their own journeys, what
O’Malley (1993) suggested was, “more like a teacher’s manual than a student’s textbook” (p.
37). And what was the reward for such worldly toils? Again, the Jesuits (Ignatius included)
would have seen the work of saving souls as the ultimate success one could achieve on earth;
therefore, the reward would have been both temporal (in terms of the personal sense of
achievement in helping others) and eternal (vis-à-vis the promise of everlasting salvation in the
kingdom of God). Regardless, the work involved in the process of Ignatian discernment was not
without risk. De Nicolás (1993) claimed, “The enemies of mystical practice have been the social
orthodoxies of theology and scientism. While theology claims a base in experience, in practice it
devalues the manipulative control mystics have over the building of such religious experience”
(p. 37). Recall Ignatius’s early imprisonment at Salamanca after being mistaken for a mystic
outright (the alumbrados). On the one hand, the Jesuits were pressured by the Catholic Church to
stay within the bounds of its theological doctrine; on the other, the Jesuits were given a large
share of the great responsibility of ensuring the success of the “new Catholicism” that was
assumed during the Counter-Reformation and in the years after the Council of Trent. Therefore,
the work with which the Jesuits engaged was perched upon a delicate fulcrum of intersecting
interests, traditions, expectations, and philosophies – social, political, religious, intellectual, and
even financial. The Jesuit brand of Catholicism clearly placed more responsibility in the hands of
the individual – a marked change from the previous dogmatic bases of pre-Reformation
Catholicism. Again, before the Reformation, a Catholic’s duty would have been to attend mass
weekly and “receive” the Word of God; a passive and uncritical process driven by faith. Ignatian
spirituality, inasmuch as the Spiritual Exercises provided the opportunity for the individual-with-
God approach to religion, made human agency within the Catholic Church possible. During the
sixteenth and seventeenth centuries, the Jesuits must have presented the faithful with a proverbial
“breath of fresh air;” the historical documents reflect their successes in those early years and
support the notion of the attractive alternative. O’Malley (1993) noted

Because the Jesuits were not pastors, they could not by virtue of office or jurisdictional
status oblige anybody to accept any of their ministrations. Those who came to them, therefore, came of their own free will. They would come only if they were convinced they were being better served by the Jesuits than by other ministers – including their pastors. The Jesuits, in other words, did not have a ready-made clientele of the “people in the pews,” and they had to persuade people to take advantage of what they offered. This feature of the Jesuits’ ministries is fundamentally important for understanding them and also for situating them in so-called Tridentine Catholicism. (p. 74)

And come they did. The Society was formally recognized in 1540. In those early decades, especially in the towns and cities where the Jesuits were operating colleges and universities, demand at times exceeded capacities. The numbers, as recorded by Bireley (1999) detail these early successes: “By 1600 there were 236 colleges in existence… Estimates of the number of students in the Jesuit colleges in about 1630 in France alone range from 25,000 to 40,000” (p. 126). Take a moment to consider this type of exponential growth. The period from the founding of the Society in 1540 to 1630 represents ninety years. In the beginning, the number of students in Jesuit colleges would have been negligible. If we assume to reflect on the lower result of 25,000 students by 1630, that would result (roughly) in between 250-300 new students seeking out enrollment in Jesuit institutions per year. The larger number (40,000) over that same period of time would result in roughly 400-450 students per year – only throughout France. This is quite an accomplishment for a religious order that simply waited for the faithful to approach them for spiritual guidance. Imagine the public reaction to the discordant interruptions taking place during the sixteenth century. It stands to reason that people would have been reaching for ways to make meaning in their daily lives, a sense of control or a sense of normalcy. Assume that part of this meaning making process involved a consideration of the various options vis-à-vis that were part of public discourse – not only in light of the Reformation / Counter-Reformation religious sphere – but also in the movement from medieval to Renaissance social structures. Working with this assumption, then, it is likely that the question of personal identity was rather significant for the
European population during Ignatius’s lifetime. If the goal of the individual person (while alive on earth) was self-understanding, or to find meaning in the world, then, in the Exercises, the Jesuits would have been developing a perfect model to help along that journey of “freeing” the soul. O’Malley (1993) noted, “One of the most innovative features of the Exercises was the role played by the person who helped another engage in them. If such guidance was helpful during the retreat, it might be helpful throughout one’s life” (p. 47). Again, the model of Ignatian discernment emphasized the individual’s journey inward towards the development of the soul, but that journey required one who had already engaged with the process. What the Jesuits developed was a new type of Catholicism that was built on a foundation of the teacher-student relationship, with hopes of creating a legacy of people who would dedicate themselves to bettering the lives of those with whom they worked. Discernment was not a process reserved only for the members of the Society, but was designed for all those who sought out more fulfilling or rewarding lives. The exercitant required the assistance of the mentor, as the method was steeped in the mystical tradition, which De Nicolás (1993) claimed, “is built on the building of an interior experience, or in mysticism experience comes first” (p. 37). In short, the goal of the Exercises was simple: help people find meaning in their lives. It was a noble goal, to be sure, but, as it turned out, set the stage for the much larger ministry of education that was to follow on a global scale.

The Jesuit ambitions have not been without critics, then or in the present. There are many concerns in the modern postcolonial, poststructural moment in which many attempt to confront the historical work of the Jesuits by emphasizing their colonial ambitions during the past five centuries. This attempted diminishing of influence can be appreciated within the convenience of time or place. Not to be dismissive of these voices of protest against the Jesuit tradition, but this
afterthought of colonization, while an important acknowledgement, deserves a brief moment.

The “afterthought of colonization” is mired in sensitive complications. Some may claim that this investigation offers a romanticized view of the basis for Jesuit mission work. Indeed, the

*Relations*, while thoroughly documenting the lives of the Natives, still referred to the people as “savages” who were in need of Christian conversion and Natives were often assigned western names, stripping them of their own identities. Blackburn (2002) stated

> The authors of colonial texts commonly described the colonized in a way that denied them any agency and placed them within histories that were not of their own making. This is an important feature of the Jesuits’ writing, which depicted North America and its inhabitants as a land abandoned, lost to time, and recuperable only through the agency of Europeans. (p. 15)

Again, for the purposes of this investigation, I have identified the establishment of the Jesuit global network of education as a positive episode of history, but Blackburn’s notion above, in which European agency displaces Native agency, is central to the notion of colonization.

Regardless of what the Jesuits may have claimed to accomplish from a western point of view, the opinions of the Natives would have undoubtedly been different. Blackburn (2000) noted the Jesuits

> were the heirs of a Renaissance humanism that had engendered considerable interest in the study and collection of information on the “piece of work” that was humankind. This included the increasingly systematic collection and description of differences in the customs, traits, and manners of people both in Europe and abroad. The *Relations* thus combine descriptions of the allegedly savage and superstitious practices of Native people with careful accounts of their economies, material culture, ritual practices, and political structures. (pp. 4-5)

The tone of the work that was undertaken by the Jesuits during the colonial period, then, was framed by Renaissance humanism, and the Jesuits approached their global pursuits as possibly

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13 *The Jesuit Relations* is an epic work of early ethnography written over the course of 200 years by the Jesuits in French Canada beginning in 1611. The *Relations* documented the cultures and customs of the Native Americans in North America. The collection consists of over 70 volumes of work.
the earliest ethnographers to perform thick descriptions of the native populations with which they came into contact. To illustrate the point, Palmer, Padberg, and McCarthy (2006) translated a letter written by commission of Ignatius, from Juan de Polanco to Niccoló Lancilotti in 1547, in which he seeks to better understand the situation in Goa (India):

Our Father, then, judges that you should send to us from [India] a competent man who can faithfully report on your own and India’s affairs to the Sovereign Pontiff and dignitaries of the Roman curia, and whose coming would offer Father Ignatius an occasion for procuring provision for you from the treasuries of the Church… he should also bring us in writing a full account of whatever it would be worthwhile to know in providing for you and for India: climate, food, customs, and mentalities of persons and places, as well as whatever you think is needed for the worship of God and the help of souls there and throughout India. (pp. 224-225)

It is important to remember that, for the Jesuits, evangelization and education were part of the same tradition. Jesuit schools were nothing more than spaces of contemplation, where students (under the guidance of their Jesuit mentors) might wade through the possibilities of the world to “find God in all things.” Yes, contemporary discourse has the privilege of debating whether the sixteenth and seventeenth century Jesuits had any right to impose their beliefs on the unassuming people of India; however, with this case in particular, one can conclude that the Jesuits would have likely been working to convert members of Indian castes who had no hope whatsoever of leading lives that we today would consider “just.” The work of the Jesuits, then, could be considered a liberating force. Furthermore, any discussion, however brief, of the cultural forces at play in the worldwide movements of the Jesuits requires a conception of processes of Creolization; to this end, there are a few key points to consider when examining the work of the Jesuit fathers in relation to Creolization theory. Eriksen (2007) defined “Creolization” as “cultural phenomena that result from displacement and the ensuing social encounter and mutual influence between/among two or several groups, creating an ongoing dynamic interchange of
symbols and practices, eventually leading to new forms with varying degrees of stability” (pp. 172-173). However, the early Jesuits were not displacing people; they were living with and among them, learning their vernacular languages, customs, rituals, and documenting all of it. Also, Eriksen (2007) explored the notion of syncretism, which focuses “attention toward the amalgamation of formerly discrete world views, cultural meaning, and, in particular, religion” (p. 172). Syncretism, therefore, in terms of Creolization and the early Jesuits, was a rather daunting task, as it required much work on the part of the Jesuits themselves, who had the unenviable task of (1) gaining entrée into native cultures and (2) convincing the native people of the value of conversion. The colonial ambitions, it seems, may be overstated by critics of Jesuit missionaries, especially in light of Stewart’s (2010) observation that “syncretism became a term of abuse often applied to castigate colonial churches that had burst out of the sphere of mission control and begun to ‘illegitimately’ indigenize Christianity instead of properly reproducing the European form of Christianity they had originally been offered” (p. 289). Clearly, the odds were stacked against these early missionaries, as they began the process of indigenizing European Christianity, which seems to be an admission of defeat on some level; regardless, the Jesuit experiment was still a lasting success, as it has endured to the present day.

Epistemology & Ignatian humanism

For Ignatius, ways of knowing were inspired by the outward action following the discernment process. The main epistemological foundation of Ignatian humanism is Ignatian pedagogy, which is aimed at helping others recognize their own talents and purpose in life. Ganss (1956) noted that Ignatius “regarded education as a means of attaining the end of his Society, the salvation and perfection of the students, in order that they in turn might promote the salvation and perfection of their fellow men…” (p. 191). To this end, Ignatius sought to create an
army of soldiers trained to achieve the goal of educating the masses, and, judging by the rapid
growth of the Order in the first century after its founding, the men were highly successful.

Cesareo (1993) proposed that Ignatius had two objectives in creating the Jesuit colleges: “to form
a good, solid Christian leader who could exert a positive influence on the social, political, and
cultural environment in which he lived and, by means of this, to allow for the spiritual progress
of one’s soul on its pilgrimage toward salvation” (p. 20). If one agrees with this estimation, it is
easy to assume the effects of a Jesuit education were designed to be far-reaching. Before the
Jesuits, there was no single organization with a global educational network. Naturally, then, there
was no single organization that was able to claim any influence – positive or negative – over the
social, political, and cultural environments of the time. McGucken (1932), however, indicated a
critical consciousness among those early members of the Society:

Some of these early Jesuits… glimpsed the possibilities latent in a unified body of
educators. Here was a sphere of influence greater than that exercised by any of the
universities; they would have professors from all the universities of the world; they
would combine the best pedagogical principles of the different nations; their schools must
and could be made so thoroughly systematized that they would be the envy of all the
world. (pp. 9-10)

Perhaps this explains the rapid growth of the Order. Never before had such possibility existed in
an organization. The Jesuits, unlike diocesan priests, were not bounded by parish lines; the world
itself was their dominion. And, because they were free to roam the world, people actively sought
them out. Again, in those formative years, after establishing initial successes in a few key cities,
the Jesuits began to be recruited by people across Europe and, soon thereafter, across the globe.
By combining their avant-garde approach to spirituality through discernment with an educational
network of colleges, the Jesuits had created an attractive niche in the fabric of Christianity.

The Jesuits have formed ways of knowing around three models of pedagogy: The modus
Parisiensis, the Classical curriculum of the trivium-quadrivium, and the emphasis on rhetorical skill – the eloquentia perfecta. These three influences are reflected in the two earliest documents governing the pedagogical work of the Society: the *Constitutions* and the *Ratio Studiorum*.

In a letter written to Martín García Oñaz from Paris in 1532, as translated by Palmer, Padberg, and McCarthy (2006), Ignatius wrote:

> I think it would not hurt to put [Oñaz’s son] more in theology than in canon law; for it is a subject more pertinent and suitable for gaining everlasting riches that will last forever and give you greater comfort in your old age. For this purpose, I doubt you will find anywhere in Christendom greater advantages than at the university here… If you consider the cost, you come out ahead with him at this university: he will accomplish more here in four years than anywhere else I know in six. (p. 4)

This is quite a compliment paid by a man who, by then, had studied at a small number of other universities. Remember that Ignatius spent more time at the University of Paris than at any other university before that; it stands to reason that he was engaged with the work that was being undertaken there. One of the central mechanisms that attracted Ignatius to the educational experience in Paris was the modus Parisiensis, or the “Parisian method.” In short, Mir (1968) noted that the modus structured the educative experience by presenting material in sequential order and required students to demonstrate mastery over the material before being allowed to move on to the subsequent courses of study. The models that existed in Spanish and Italian schools were not organized this way, and it is obvious that in Paris, Ignatius found a welcome change, but again, it is not surprising that a former soldier – who would have been so accustomed to regimented living – would have found this methodology appealing. For instance, it was not until his arrival at the College of Montaigu in 1528 that Ignatius first encountered the notion of a student being “promoted” to a higher class after having taken an exam in grammar. One thus assumes that, prior to Paris, Ignatius’s education had been undertaken in unstructured
Another key concept of the modus was the notion of experiential learning. Mir (1968) noted that, especially in grammar and language, the pedagogical method employed in Paris emphasized practice and recitation of material to demonstrate an effective use of the material. For those who taught in Paris, their job as educators was not simply to lecture, but to coax students into taking over their own mastery of the material, encouraging students to realize their potential. It is no accident that the modus Parisiensis influenced both Ignatius’s plan for discernment in the *Spiritual Exercises* and for pedagogy in the *Constitutions*. His followers would capitalize on their familiarity with the modus as they developed the *Ratio* in the latter half of the sixteenth century. It bears mention that Mir (1968) noted that the components of the *modus* were not necessarily of Parisian origin. What made the system unique to Paris was the combination of components into one school tradition: a solid foundation in grammar, the division of students into classes ranked by ability of the individual students, and the necessity for examination before progression. With a successful model in place, the Jesuits honed and developed their practices, but did not always find support from the ruling classes where they worked. Particularly in seventeenth century France, the Jesuits found themselves often at odds with Cardinal Richelieu, as recorded by Scaglione (1986):

> Richelieu could use the Jesuits for his ends of controlling orthodoxy and political loyalty, yet the Jesuits’ firm and well-tested devotion to the liberal arts still clashed with his distrust of them, so that the Jesuits carried on their own programs without making themselves at any time the pliable tools of monarchic policy. (p. 56)

One is reminded of the Jesuit motto, ad majorem Dei gloriam. The Jesuits were responsible to a single end: God. The methods entrusted to their educational ministry for learning and the development of souls would not bend to imperial authority – even those who purported to rule by “divine right.” Of course, it was this fixed philosophy that would ultimately lead to the
suppression of the Order in 1763, but after the removal of the Jesuit schools throughout Europe and beyond, people quickly began to lament the loss of the system; the Order was restored a half century later. The modus Parisiensis has lasting influence to this day.

Within the overarching structure of the modus comes the actual progression of courses. To this end, Ignatius turned to the Renaissance humanism of Paris and its adherence to a medieval system of Classical education. Letson and Higgins (1995) proposed, “the curriculum at Paris grew out of and adapted for its own use the traditional seven liberal arts, the trivium (grammar, rhetoric, and logic) and the quadrivium (mathematics, geometry, music, and astronomy) so central to the medieval university” (p. 137). This progression is adapted (naturally, the Jesuits would add courses in theology) and repeated a number of times throughout the Constitutions and the Ratio, and speaks to the Jesuit idea of the cura personalis. Ignatian humanism assumes a well-rounded education, and in the trivium-quadrivium, the Jesuits found yet another successful model. Currently, the liberal arts education is under increased scrutiny as society is infatuated with scientific reasoning; this disconnect highlights the importance that the Renaissance placed on the individual. Today, education systems do not count as a priority the development of the person or the progress of the soul. Instead, in today’s world, what is most valued is statistical significance, a theme to which we shall return in later chapters. The trivium, then, was considered to be the foundation of a well-rounded education, as one needed to be well spoken and erudite in one’s reasoning before one was able to move on to the more sophisticated study in the quadrivium. Scaglione (1986) noted, “the arts of the quadrivium, namely mathematics, music, astronomy, and geometry, were intimately connected as aspects of a mystical, divinely established bond among the parts of the universe and between man and his environment” (p. 9). Again, this would have clearly been an attractive option for Ignatius, as the
mystical summons contained therein spoke to his own emphasis on the discerning soul. The
notion of the “divinely established bond” also warrants mention, particularly through the
discernment process itself: the quadrivium, inasmuch as it is built on a foundation of the divine
bond between the individual and the environment – as parts of the connected universe –
permeates the process of the progress of the soul. In short, the quadrivium is a mechanism that
(for students of Ignatian discernment) can be used to recognize one’s potential in this temporal
world. The well rounded / liberal education, as contained within the trivium-quadrivium, was a
perfect vestige of the medieval past onto which Ignatius was able to hold in his Renaissance
present. This intersection should not be overlooked or understated.

Within the context of the trivium, then, is found the last epistemological foundation of the
Ignatian vision: the eloquentia perfecta, or the “perfect eloquence.” Recall that part of Ignatius’s
hope was the development of a Society that, once they had completed the discernment process,
would be able to go out into the world and help others find their own way down the path to the
progress of the soul. To achieve that goal, eloquence was required, as – Ignatius believed – one is
more apt to follow the lead of one who is charismatic and persuasive. Even during his lifetime,
Ignatius knew the value of rhetorical skill. And, though as seen in his letter to the Jesuit fathers
attending the Council of Trent, Ignatius emphasized humility above confrontation in the public
realm, it was clear that he expected his followers to be prepared to engage with dissenting voices.

Letson and Higgins (1995):

The Constitutions placed a heavy emphasis on debate, disputation, and public defense of
contentious theses. Not only the students, but the professors too were to dispute publicly
with one another. Cicero’s rhetoric and the Renaissance admiration of eloquence, right
reason, and oratorical style (of eloquentia perfecta) combined to make the Jesuit a
formidable adversary in confrontations with the Reformers, and gained for him both a
respect and a suspicion for effective use of rhetorical schemes and tropes. (p. 139)
The implication is clear: if necessary, a Jesuit – or a student of the Jesuits – needs to have control of the situation and, through oratorical aptitude and proficient persuasion, is expected to meet any challenge with dexterity. But, the sword cuts both ways, as it was also this rhetorical skill that so often placed the Jesuits squarely in the crosshairs of many nobles and governments throughout history. The skill was intended, as suggested by Ganss (1956) to move an audience and convince it of some serious point by means of an elegant Latin address, sermon, or disputation. One who could so move his hearers in Latin presumably could also move them in his vernacular when he had occasion to use it – for example, when his audience contained uneducated persons. (p. 47)

Put differently, for any member of a Jesuit community, then, the eloquentia is essential for two reasons: first, to engage with others who have the benefit of education and, second, to engage with those who do not, which leads to a final investigative passage on the topic. O’Hare (1993) summed up rather eloquently:

The classic expression *eloquentia perfecta* was meant to sum up both intellectual and moral qualities… Education, then, must focus on the whole person. But we also talk of establishing an environment of personal care and attention to individual students. Education must focus not only on the whole person but on each person, we say. More specifically, we insist on the importance of religious thought and experience and the centrality of theology in education. And we have even claimed, or at least some of us have, that a certain openness to innovation and adaptability is also distinctive of the Jesuit approach to education. (p. 145)

A few concluding observations: first, the notion of a comprehensive education, both intellectual and moral – the education of the whole person, or the cura personalis. Again, the Jesuits assumed that such a means was possible through the completion of a liberal education. Second, the charge to establish a rapport with individual students: this should come as second nature to a member of the Jesuit community, as it is directly tied back to the mission of discernment embodied in the *Spiritual Exercises*. After all, how can one be expected to help another to seek out the progress of the soul if there is not a familiarity between the parties involved? More than anything,
possibly, the Ignatian vision is one of community. Third, and perhaps most important here (as there has not been a substantial mention of this so far in this investigation) is the notion of adaptability. Ignatius, perhaps building on the experience of living in such chaotic times himself, valued the idea of adapting to one’s time and place. In this sense, it is easy to see that Ignatius had much grander expectations for his society than he witnessed in his own life, and it is a principle that contributes to the success and preservation of the Ignatian tradition to this day. Ignatius was cognizant of the temporality of the embodied world; thus, he had the benefit of a transcendent vision in planning for the future of his Society. In doing so, it seems, he wanted to ensure that his followers were not too rigid or dogmatic in approach to life. The goal for the Jesuits has always been to help others realize their own potential; this has not changed with the passage of time. What has changed, however, is the contexts in which that work has taken place. Regardless, no matter the customs, the culture, or the political, social, or intellectual winds of the era, if one is able to embody the spirit of the eloquentia perfecta in one’s own time (at least in the Ignatian vision), one can continue the work of saving souls.

Regarding the two early governing documents, Part IV of the Constitutions is dedicated to the rules and expectations for the education of members of the Society and extern students. Again, the former group was obviously the main focus of the ministry in education, but, as the Jesuit successes spread throughout Europe and across the world in the first century of the founding of the Society, the latter group would grow quickly. When reading the Constitutions, it may be difficult to imagine the context in which Ignatius wrote it, but we know from Ganss (1970) that the framework was deliberately and delicately formulated, essentially to address the poor state of centralized authority within the church:

In Corsica in 1522, none of the bishops of the island had been there for sixty years. Many
of the priests did not correctly know the formula of consecration in the Mass and earned their living as laborers. It was almost unheard of that parish priests should preach. (p. 11)

One certainly gets the feeling of dysfunction. This theme of Ignatius having the benefit of place and time is recurrent and comprehensive. The Church was desperate for direction. Ignatius was, if nothing else, a visionary.

What does Ignatius say about educating students in his vision? Quite a bit, actually. Reading Part IV of the *Constitutions*, one sees a glimpse into the worldview of a man who was certainly aware of the forces affecting students in colleges and universities. As translated by Ganss (1970), Ignatius warns

> …special attention should be given to [students’] abstaining from studies at times inopportune for bodily health, to their taking sufficient sleep, and to their observance of moderation in mental labors, that they may have greater endurance in them both during the years of study and later on in using what they have studied for the glory of God our Lord. (p. 183)

Remember, Ignatius was in his mid- to late-30s when he was pursing his studies; he was accustomed to the life of a military man. One can deduce that, in passages like this one (there are others that speak similar language), Ignatius is sending a message to those in charge of the classroom: have mercy on your students. Obviously, there are practical reasons for observing the health and wellness of pupils: first, an ill or sleeping student will distract others’ attention in the room; second, a fatigued student will not be fully attentive and thus, less likely to absorb the material presented; and third, if a student has not retained the knowledge presented, then he will be a less effective representation of what Ignatius had hoped for in designing his educational system. In no unclear terms, Ignatius emphasizes the need for presence in the classroom, mind, body, and soul.

The historical documents highlight the importance that Ignatius placed on learning Latin,
Greek, and Hebrew (as the Classical languages that one needed to have knowledge of in order to be an effective communicator during the fifteenth century) as well as the vernacular language of the regions in which one would be working; it is no accident, then, that Ignatius would have devised very specific regulations regarding the development of language and rhetoric skills.

Ganss (1970) transcribed:

> Those who are studying humanities should also have their fixed times to discuss and debate about the matters of their branch in the presence of someone who directs them. After dinner on one Sunday or other designated day they too will defend theses; and on another they will exercise themselves in writing compositions in prose or in verse, whether that is done impromptu to show their facility, or whether they bring a composition previously written and read it publicly there. (p. 195)

Here, one begins to understand the cycle of learning Ignatius envisioned: learning, writing, and defending. If nothing else, the public debates and defenses served as a means of motivation for students who may have been wearied by the rhythm of the classroom. Ganss (1970) recorded from Ignatius’s directions, “it would be wise to place together some of equal ability who with holy rivalry may spur one another on” (p. 196). The historical documents also depict Ignatius as a pragmatist. He acknowledges that some students might find, after time, they may not be best for the academic life. For those who become disillusioned by the classroom, Ignatius suggests (from Ganss, 1970), “it is better to remove him from it and to let someone else enter in his place who will make better progress for the end sought, the service of God” (p. 197). Ignatius was not creating a Society of elitists; he was simply cognizant of each person’s strengths and weaknesses. Recall the process of discernment here: some will inevitably find success in an academic life. Others will need to be shuffled around a bit. The important thing, for Ignatius, was that each person who approached the Society was able to find a place that fit them well.

Regarding the classroom content, aside from the topics to be covered (language, rhetoric,
theology, etc.), we do not gather much else in terms of texts or teaching materials. It is
documented that Ignatius preferred Aristotle to other ancient philosophers, and that he adhered to
theological doctrine as spelled out by St. Thomas Aquinas in his *Summa Theologica*, but one
passage of the *Constitutions* depicts Ignatius as a censor, translated by Ganss (1970): “lecturing
to the adolescents on any book which contains matters harmful to good habits of conduct should be avoided, as far as possible, unless the books are previously expurgated of the objectionable matters and words” (p. 220). After all, his many innovations aside, Ignatius was still a priest working within the Catholic Church. It should not be surprising that he would have been mindful of pushing the envelope too far. In the end, Ignatius dedicated an entire chapter of his *Constitutions* to the educational ministry of his followers. To what end, then, did he consider education? Ganss (1970) translated:

> In the matter of the degrees, both of master of arts and of doctor of theology, three things should be observed. First, no one, whether a member of the Society or an extern, should be promoted to a degree unless he has been carefully and publicly examined by persons deputed for this office… Second, the door to ambition should be closed by giving no fixed places to those who receive degrees… Third, just as the Society teaches altogether gratis, so should it confer the degrees completely free… The rector should also take care not to permit any of the teachers or other members of the Society to accept money or gifts… For according to our Institute, our reward should be only Christ our Lord… (pp. 222-223)

The notion of examinations to demonstrate mastery of content, though all too familiar in the present, was not widely practiced in Ignatius’s day. For him, it was essential that students at the Jesuit schools be held responsible for their own learning. They were held to a high standard, and expected to learn from the lecture, then imitate, and then defend their own work. In this repetitive cycle, one was able to succeed and move on to other work. Next, Ignatius warned that those who received degrees should not have any expectation for advancement within the Society, simply because they had succeeded in the classroom. Here, Ignatius was reminding his followers
that, though accomplished, they were still members of the Society and, therefore, were still especially bound by the vow of obedience. The Society knew where its members could do the best work; therefore, in becoming a Jesuit, one understood that they were subject to the direction of the Superior, who acted as an administrator by region. Also, the notion of the gratis degree is noteworthy, as it is clear that Ignatius was attempting to avoid the same pitfalls that plagued the Church before the Counter-Reformation and highlighted his focus on the shifting worldview, careful not to repeat the mistakes of the past. The work of the Jesuits in general (and, here, the educational ministry in particular) was meant for the glory of God. Its members did not require compensation for their work, and its students were not expected to pay for the experience. Correspondingly, Ignatius nods back to the corruption of the past by instructing teachers to refuse any compensation for their efforts. By keeping the floodgates closed from temptations, Ignatius was essentially able to keep his members from any suggestion of bribery or of licentiousness. He wanted his Society to be, above all other things, a beacon of hope in what had been a rather dark century in the history of the Church. This idea is highlighted in the last passage – for a Jesuit, the only reward that one should expect cannot be found here on earth. The promise for a job well done will be found in eternal life, after one’s worldly duties have been completed.

If the *Constitutions* were a collection of rules that guided the educational mission of the Society, then the *Ratio* was a collection of rules that guided the classroom practice. Put differently, the *Constitutions* were designed for macro-level governance, whereas the *Ratio* was designed for micro-level governance. Again, built upon the traditions of the modus Parisiensis, the trivium-quadrivium, and eloquentia perfecta, the *Ratio* helped the Jesuits bring the gnostic tradition of education to life, as stated by Davis (2004), “the word *educate* originally arose,
derived from the Latin *educare*, ‘to drag out or pull out.’ To educate was to draw out, by whatever means, what was assumed to be already there, woven into one’s being from the beginning” (p. 53). The process, then, assumed that students would be able to demonstrate mastery of material, mainly through the Classical tradition of rhetorical skill, though still receive a well-rounded education, all towards the common end product of the discerning soul. It was a challenge that no other Catholic order had previously undertaken.

First drafted in the operational plans for the universities at Messina and Rome from the 1550s, the *Ratio* was rewritten and revised through the 1580s, when it was first approved by the fifth Superior of the Society, Claudio Acquaviva, in 1586. Subsequent revisions would occur, with the final version officially adopted in 1599. The Society used the *Ratio* as the global template for its educational ministry. Though, as tends to happen to successful models of change, it was ripe for controversy during its time. There was especially pointed criticism levied on the *Ratio* and the entire Jesuit educational program by the Protestants who adhered to a similar educational program, born from the Brethren of the Common Life and propagated by its most famous figure, the headmaster of Strasburg, Johannes Sturm, who had developed the “Gymnasium” model of education in Germany. Not to be dismissive of such claims, but it is important to remember the historical contexts surrounding the development of both educational traditions. Both were largely the result of Reformation / Counter-Reformation initiatives, and both were intensely influenced by the emerging practices of Renaissance humanism.

According to Farrell (1970),

There are four principal areas contained in the *Ratio Studiorum*, namely, administration, curriculum, method, and discipline. It begins with administration by defining the function, interrelation, and duties of such officials as the provincial, rector and prefects of studies. It outlines a curriculum by placing in their proper sequence and gradation courses of study in theology, philosophy and the humanities. It sets forth in detail a method of
conducting lessons and exercises in the classroom. It provides for discipline by fixing for the students norms of conduct, regularity and good order. (p. x)

It may seem a bit overzealous for the Jesuits to have spent half a century creating a document that spelled out in such great detail the rules and regulations to govern the work of education, but as suggested by Foss (1969), “schooling of the time too often lacked any organization at all, and so nothing was taught; while the discipline, everywhere severe, was elsewhere so capriciously and willfully applied that it amounted to brutality. Schooling was a desperate business” (p. 173). It is also important to remember Ignatius’s training and experience as a soldier. It stands to reason that he would have been a proponent of a highly structured and regimented program for his schools. Undoubtedly, his followers knew this all too well and followed through in developing the Ratio itself.

Regarding classroom decorum, the Ratio, as translated by Farrell (1970) spoke even to the manner in which professors were expected to handle debate in the classroom:

In arguing debatable questions, [professors] should defend [their views] with such modesty and courtesy as to show respect for the contrary view, the more so if it was held by [a] predecessor. When it is possible to reconcile diverse views, an attempt should be made to do so. (p. 26)

This seems to be a clear nod to the lasting influence of Ignatius himself, who was all too familiar with the volatility and implications of divisive discourse. One is reminded here of the letter written to the Jesuit fathers who attended the Council of Trent. Translated to the classroom experience, the Jesuits suggest that there is not necessarily any inherent value in arguing for the sake of arguing. Notably, the language “the more so if it was held by a predecessor” speaks to the emphasis the Jesuits placed on the respect of institutional memory. A new professor, for instance, would have little or no background knowledge of those who came before him; therefore, the best advice would be for him to tread softly, at least in the beginning, so as to not
alienate himself from the opinions or customs of the group. Always politic, the Jesuits sought to keep peace, even in the classroom.

Farrell (1970) recorded that, to students, the *Ratio* recommended, “At the conclusion of a lecture, the students in small groups of about ten each should spend half an hour reviewing among themselves the lecture just given” (p. 43). In a clear pronouncement of the value of reflection and meditation, the Jesuits are, here, training their students to take time to seek understanding of the subject matter presented in class. The expectations for performance were high, as documented by Farrell (1970):

…papers should be up to the standards of each one’s class and clearly written in the vocabulary and style demanded by the theme. Ambiguous expressions will be construed unfavorably, and words omitted or hastily altered to avoid a difficulty will be counted as errors. Seat-mates must be careful not to copy from one another; for if two compositions are found to be identical or even alike, both will be open to suspicion, since it will be impossible to discover which one was copied from the other. (p. 58)

There is not much room for error; implied here are the assumptions that students will take time to ensure their language makes sense, that their penmanship is legible, and that their work should be meticulous in terms of content and flow. Also evident is the expectation of integrity in one’s work, as the Jesuits present very clearly their intolerance of dishonesty in academic work.

Sections of the *Ratio* read as a form of social commentary and expose facets of fifteenth century society that are not all that unlike those of the present day. The myth of progress is palpable in the following passage from Farrell (1970):

None of our students shall enter the school with weapons, daggers, knives, or anything else which may be forbidden by reason of place or circumstances. Students must never indulge in swearing, ridicule, insult, detraction, falsehood or forbidden games. They must keep away from places of ill repute and from such as have been proscribed by the prefect. In short, they should not do anything that is contrary to good morals. (p. 101)

A few observations: first, the list of possible weapons implies that ours is not the first generation
to grapple with school violence. One has a mental picture of fifteenth century college students reaching for daggers at the first sign of frustration; it is safe to assume that, for the Jesuits to include this passage in the *Ratio*, there must have been good reason. Second, it seems that human nature has remained oddly constant for the past half millennium, as students were being warned against ridiculing and insulting each other and from participating in “forbidden games.” Again, taken out of context, it is not far fetched to assume that this passage could be substituted for language in a twenty-first century school without anyone taking notice. The adage “kids will be kids” seems appropriate here. Of course, the final statement in this passage reminds students of the earnest work with which they are being trained to engage. The end result of a Jesuit education is the help of those in the community – magis and the cura personalis – therefore, for one to assist the unlearned in the growth of the soul, one should be as much of a model as possible. It stands to reason, then, that the *Ratio*, would emphasize the importance of good moral character.

**Ignatian humanism & the role of education**

Davis (2004) stated “Gnosis, with its focus on meaning, casts the individual as a participant in a universe permeated by the divine” (p. 36). Ignatian humanism is firmly rooted in the gnostic tradition, its aim simply to assist the individual in his or her journey towards self-recognition for the greater glory of God. To Ignatius, the greatest earthly achievement one could attain was the realization of one’s full potential; even more rewarding was the ministry assumed by the members of his Society to help those in search of their soul. The Ignatian vision was built on an intensely humanistic worldview, driven by a mystic summons, with an ultimate goal of understanding the forces of the universe and the divine manifestations therein. O’Malley (1993) suggested, “The Jesuits adopted the humanistic program for a number of reasons, but especially
because… they believed that humanistic studies formed upright character, *pietas*… [pietas assumed that] the truths learned were expected to have an impact on the pupil’s behavior and outlook” (p. 212). The assumption was simple: after being a student in the Jesuit tradition, he would take the experiences gained from both the discernment process and Ignatian pedagogy and become a contemplative in action in the world around him. Part of the process involved critical ruminations on life’s big-picture questions, from the gnostic tradition, as implied by Davis (2004), “with its focus on the meanings of existence… [that acknowledge] that some things exceed human capacity to understand in explicit and direct terms” (p. 27). To this end, the Jesuits aimed at recognizing where the human ends on earth and the divine begins in the ethereal. This virtuous work obviously attracted large numbers of followers in the first century of the Society. It might even be suggested that the Jesuit model, inasmuch as it empowered individuals to seek meaning in the grander tapestry of the universe, was a seductive force. McGucken (1932) claimed, “Jesuit education is intended to leave a definite impress on the youth; to give him a definite philosophy of life, to prepare him as far as possible to be a forceful leader of Catholic thought and action” (p. 165). Especially when considering the plight of young people who can be generally inclined to angst, the promise of grappling with and understanding a philosophy of life can be quite alluring. The Jesuit model gives the gift of voice to its students through the study of language and rhetoric; it gives the gift of knowledge to its students through the study of the liberal arts, sciences, theology, and philosophy; and it gives the gift of peace in helping its students know themselves. These are lofty goals, but they are at the center of Ignatian humanism. Donohue (1963) indicated it differently:

> [Ignatian humanism] is a humanism for three chief reasons among others: because it affirms the exceptional dignity of man in the contingent universe and advocates his full and ideal development; because its precise concern is for mankind, for the entire human
race rather than for some select portion of it; and because it takes seriously that historic process in which men live and which forms them even as their own responsible decisions are in turn shaping it. (p. 20)

A key consideration here is the notion of context and how our historic processes help shape where we are. After all, for Ignatius, it is a question of process: one needs to have a firm grasp of from whence they came before moving on to an awareness of where they are and where they are going. It is a lifelong process, with an all-encompassing reach. Ganss (1956) told:

The Greeks used the word *PAIDEIA* to mean the training of a child to take his part in life as an adult. As they clarified their concept of man from Homer to Aristotle, they correspondingly developed their concept of *paideia*. By Plato’s time it meant the training of a child, as a being of body and soul, to take a capable part in the social, cultural, and political life of his day. It entailed, beyond the concern of the parents or teachers, the effort of a society to train a youth into conformity with its cultural ideal, that, if developed himself, he might contribute to the welfare of his fellow citizens. It included intellectual education as an indispensable element, but training of the intellect was by no means the whole of it. In Greece, the training or *paideia* was naturally different for the freemen and the slaves. Especially in Aristotle do we find clear distinction between the training in the arts which were deemed especially characteristic of the freemen possessing leisure for contemplation and the training in the useful arts then thought to be suitable particularly and almost exclusively for the slaves. It is worthy of note that his distinction was based on an accident of economic status rather than on the nature of man. (p. 139)

This tangent is noteworthy because of the influential nature of the Classical system on both Ignatius himself and on the Society that he left behind. *Paideia*, just as the concept of Ignatian humanism, assumes the development of meaning in one’s life before action in life. It is a process in which an individual embraces the responsibility of care for both himself or herself and the care of those around them – locally, nationally, and globally. It is a process built on universal ethical principles about the nature of humanity and the need to improve the lives of everyone in society. Again, these are ambitious and idealistic goals, but they are also worthwhile pursuits. Ignatius envisioned that anyone who sought the challenges provided in these goals would be prepared for a transformative experience that would leave them not only better people, but better citizens,
better neighbors, and better leaders on earth; the reward, in turn, was eternal salvation.

Regardless, in the end, it seems as though Ignatius’s model was ideal for his original goal: the saving of souls. The eloquientia perfecta – when tied to the ethnography work in the missions – would have been essential training for those who were engaging with native populations. Were the early Jesuits forces of colonization? Yes, but why would they have spent so much time detailing the lives, cultures and customs of these populations if their was some sinister plan to eradicate those same lives, cultures, and customs? The Jesuit emphasis on the individual is empowering at the individual level, not menacing towards the societies in which those individuals live. Through our poststructural gaze, we are able recognize the significance of the ontological and epistemological structures that shaped both Ignatius himself and the Society of Jesus in the sixteenth century and beyond. Cormack and Green (2009) stated

The view of history as discourse means that no longer can the study of history assume simply or simplistically that there is a “reality” or “past” which lies outside of historical or textual representation; one which can provide a touchstone for verifying or checking a history. This has two implications for the conduct of historical research into curriculum. First, it means that historical sources must be thought of as “texts” or symbolic resources which are themselves the product of discourses, rather than transparent representations of what people thought or believed… The second implication is that historical research itself is also an act of… writing that is constituted within discourses. (p. 228)

Again, the threads of chaos in the sixteenth century paint Ignatius as a beacon of hope in a world of discordant turmoil. What we have in the historical documents is a record of success in sixteenth century education that was unparalleled at the time. The legacy, as documented by O’Malley (1993), was significant: from the founding of the Society in 1540 through the first two centuries, “the Society established its remarkable network of more than eight hundred educational institutions, primarily in Europe and Latin America, but also in other parts of the world, a truly unique phenomenon in the history of education” (p. 239). And to think, in terms of
understanding the complicatedness of the discourse of history, all of this was made possible by a single cannonball fired from the French forces at the Battle of Pamplona in 1521.
What does it mean to be human? The question is perennial, enduring. It is the fodder of poets, mystics, and philosophers. It seeks to shed light on our very purpose in the world. If one takes a historical glance backward over the past millennium, the answer to this question has evolved very little. The medieval view linked human experience to a God-centered ontology, informed mainly by theology and mysticism; knowledge, therefore, was also derived from the church’s liturgical tradition. During the Renaissance, the “human” itself was celebrated; the apogee of creativity and possibility, man-centered, defined primarily by the possibilities of the human mind. Knowledge during this period was, naturally, inspired by the Classical period inasmuch as it feted the humanist tradition. Beyond the Renaissance, there was, granted, the Enlightenment and its rational and empiricist epistemology – but still a man-centered epoch. With the Industrial Revolution, there was a critical shift that emphasized the importance of machines, but this is not ontological: those machines were dependent upon human operators, and thus, simply more sophisticated tools than those we had seen before. It was not until the mid-20th century (post World War II) that the present ontological shift began to take shape with the introduction of the first computers. Throughout the late 20th century, as the computer became a more complex and “smarter” machine, the stage was set for this radical shift. The introduction of the World Wide Web in 1991 was the final step in moving from the humanist era into the posthuman era. By the dawn of the 21st century, machines were no longer simply extensions of the individual; machines redefined daily lived experiences and ultimately led to profound changes in traditions of “being human.” In this chapter, it is proposed that the 21st century, much
like the 16\textsuperscript{th} century of Ignatius, will live in history as an era of ontological rupture; that during this period “being” shifted from a humanist focus to a posthuman focus. In turn the posthuman era also presents us with new epistemological considerations.

\textbf{Interstitial intimacy: Baudrillard at the crossroads of time}

In the beginning, there was Heidegger. Or, at least, that is to say, at the beginning of this genealogical moment, there was Heidegger. One should not begin an exploration of posthumanism and its implications on modernity without first taking a glance backward to see what made Baudrillard’s theorizing about hyperreality possible. I argue that Baudrillard was able to cast a critical gaze on the simulated state of reality as a result of the foundational questioning of Heidegger’s seminal work, \textit{Being and Time}. It is difficult to pinpoint “beginnings” or “endings” when considering paradigms, but when examined genealogically, one sees the threads that weave together the stories of our times and highlight spaces where these paradigms took shape. Heidegger’s phenomenological examination of existence, first published in 1927, is one of the key threads that paved the way for the posthuman movement because it problematized the nature of “being.” For Heidegger, “being” – that is to say, our ontological situatedness – can only be considered in terms of our “being in the world.” Ontological inquiry, then, requires an entity (for only an entity can understand). For Heidegger, (1927/2008) the entity is the “Dasein:” “If we are to formulate our questions explicitly and transparently, we must first give a proper explication of an entity (Dasein), with regard to its Being” (p. 27). In explicating Dasein, Heidegger suggests that the environments in which we live affect our basic primordial experience; we are, in other words, temporal and emergent: “‘World’ functions as an ontological term… And indeed ‘world’ can become a term for any realm which encompasses a multiplicity of entities” (p. 93). This reflects a physical ontology: life as temporal and emergent, ever-
The notion of multiplicities was later central to the semiotic work of the theorists of the 1960s, among those, Marshall McLuhan and Jean Baudrillard, who initially focused on the nature of reality in the space of unrelenting signs and the influence of mass media on being. The pressures of these new technologies exposed humanity’s temporal tendencies in a major way, essentially abbreviating daily lived experience vis-à-vis the proliferation of print advertising and the increased presence of technological machinery. Heidegger’s notion of “being in the world” was redefined in terms of McLuhan’s (1964/1994) notion of extensionism:

Today, after more than a century of electric technology, we have extended our central nervous system itself in a global embrace, abolishing both space and time as far as our planet is concerned. Rapidly, we approach the final phase of the extensions of man – the technological simulation of consciousness, when the creative process of knowing will be collectively and corporately extended to the whole of human society, much as we have already extended our senses and our nerves by the various media… Any extension, whether of skin, hand, or foot, affects the whole psychic and social complex… Today the action and reaction occur almost at the same time. We actually live mythically and integrally, as it were, but we continue to think in the old, fragmented space and time patterns of the pre-electric age. (pp. 3-4)

How prophetic, as McLuhan first wrote this passage in 1964 – a decade before the birth of the personal computer and the later viral growth of World Wide Web culture in the 1990s and into the 2000s. It is easy to see that one limitation of extensionism, through the simulation of consciousness, could be the death of the individual in favor of homogenization of society through gadgetry. For instance, once a technology takes over as the primary mode of communication, McLuhan is correct: the medium dominates; the individual human shrinks into the background. In other words, we become our gadgets; our gadgets become us – it explains why news agencies report on “the iPhone effect,” where people who are focused on their gadgets walk into other people, objects, or (in some cases) off of train platforms and onto the tracks: the
human experience becomes secondary to technology. Modern theorists term this phenomenon, where human and machine merge, as the “Singularity” (this notion will be the focus of Chapter 6). Additionally troublesome in this passage is the warning McLuhan offers in terms of our traditional ways of thinking in the space of innovation. Because technology is inherently dispersive and fragmentary, our technological contexts keep us in constant paradox (essentially “living” immersed in disparate technologies but “thinking” in terms of continuous and horizontal progression – an illusion that perpetuates the myth of progress). The paradox is resolved by postmodernism and the shift from linear to fragmentary (genealogical) thought.

For Heidegger, then, in the transition from modernism to postmodernism, being is contextual, situated in the world (the Dasein) and dependent upon the context of the world. For McLuhan, in the postmodern era, being is inseparable from the technological context that extends being (the embodied human is extended through machinery). For Baudrillard, in the transition to the posthuman era, being is contextual, essentially situated in hyperreality. In hyperreality, our sense of being is complicated by the loss of the embodied human as we are plunged into simulation. To illustrate this abstract notion, we look to Baudrillard’s (1981/1994) exploration of the successive phases of the image: “[the first phase marks] the reflection of a profound reality; [the second phase] masks and denatures a profound reality; [the third phase] masks the absence of a profound reality; [the fourth phase] has no relation to any reality whatsoever: it is its own pure simulacrum” (p. 6). A further analysis is warranted: take, for instance, a painting. For the purposes of this thread of investigation, let us say one of Jackson Pollock’s “untitled” pieces. In Baudrillard’s first stage, the “profound reality” exists through the original work itself, where one might see it hanging on the wall at the Museum of Modern Art in New York City. Standing in front of one of these large canvasses, one is able to see the subtle
(and not so subtle) movement of the paint as Pollock dripped in long, swaying strokes, the dollops of color in layers, the thin lines where Pollock’s arms moved quickly through the air. Detail is obvious in the original – profound reality. In Baudrillard’s second stage, there is a masking of profound reality. Again, using the same Pollock canvas, think in terms of a photograph of the original. The photograph reflects the canvas hanging on the wall in the museum; you may even be able to “see” parts of the detail of the painting itself, but the photo is not the original. It suggests that the original exists, that the photographer stood in front of the original, but in the end, it is simply a copy of the original. In Baudrillard’s third stage, the image masks the absence of profound reality. Here, think of the museum gift shop and a stack of reproduced postcards of the Pollock canvas. The postcards have no original – the postcards reflect the absence of reality – they are copies of copies. The postcards, in other words, pose as authentic copies of the original, but they are not. Finally, in Baudrillard’s fourth stage, the image has no relation to reality; it is “pure simulacrum.” Pollock’s canvas, in this stage, becomes more than a copy of a copy. Perhaps someone sees an image of the original and reproduces it digitally in Photoshop. The canvas is rendered in mouse strokes on the screen, colors are bound by code, depth is flattened. Is the fourth-order image reminiscent of Pollock’s canvas? Perhaps, but even a masterful fourth-order image, because it is a simulacrum, only reflects the idea of an original. The fourth-order image is nothing more than simulated code; it has no original referent. Being, in Baudrillard’s fourth stage (that is, our posthuman ontological situatedness), is complicated by simulacra. When applying this theory to notions of humanness, one begins to see the density and frustration that surrounds the current shift from the humanist era to the posthuman era.

Ontology & posthumanism

There are three tenets of hyperreality that are most critical to answering the question of
being human in the posthuman era are simulation, ephemerality, and reductionism. In defining “hyperreality,” Baudrillard (1976/2007b) took a historical glance backward at the evolutionary phenomenon that contributed to the birth of hyperreality:

There are three orders of simulacra, running parallel to the successive mutations of the law of value since the Renaissance: The counterfeit is the dominant schema in the ‘classical’ period, from the Renaissance to the Industrial Revolution. Production is the dominant schema in the industrial era. Simulation is the dominant schema in the current code-governed phase. (p. 50)

Baudrillard illustrates the Renaissance tradition of counterfeit through the “stucco angel.” During this period, stucco became the medium of artificiality. As copies of originals were easily created and marketed as commodities, the sculptor’s skill simultaneously became devalued and the original became a victim of simulacra. In the Industrial period, production (consider the assembly line, for instance) flourished through efficiency and streamlined process, but again devalued the skill of the individual worker. Finally, in the posthuman era, or what Baudrillard calls the “code-governed phase,” we are met with simulation, or the era of the computer. Each of these spaces of history represents a key genealogical moment for humanity, as each example marks a time when technology takes over part of the human experience – part of reality. And, because Baudrillard (1976/2007b) tells us that hyperreality is dependent upon “the meticulous reduplication of the real” (p. 71), we are able to deduce that any process that enables the mass production of cultural phenomena concurrently perpetuates the hyperreal experience and problematizes “reality.” Again, the fundamental foundation on which hyperreality is built is the idea that – as society is saturated with copies of copies (that is, as society is inundated with excessive simulacra) – nothing is “original” any longer. Think in terms of furniture: people who seek out antiques value the pieces because of the history, the craftsmanship, and the imperfections. Antique furniture is valued for the uniqueness of the individual pieces; in a
hyperreal world, however, where furniture is mass-produced and sold to the “do-it-yourself”
public, furniture has lost its uniqueness – its originality. This ominous plunge into sameness
suggests troubling thoughts for the future of being human, especially as individuals continue to
spend more time connected to gadgets. In hyperreality, individuals are helpless against the forces
of the world around them. Being, then, must be considered in the context of the “meticulous
reduplication of the real,” or simulation – our first key tenet under consideration.

Perhaps, as Americans, we simply cannot escape our fate as a nation destined for
hyperreality. Baudrillard (1986/1999) suggested

America is neither dream nor reality. It is a hyperreality… Americans, for their part, have
no sense of simulation. They are themselves simulation in the most developed state, but
they have no language in which to describe it, since they themselves are the model. (p. 28)

Let us pause to consider what Baudrillard means. First, we are a nation without referentials; that
is, as (primarily) a nation of children of immigrants, we are a heterogeneous group that cannot
claim “authenticity” as being German, Russian, Colombian, Japanese, or Nigerian. In other
words, claiming ancestral heritage is the simulated experience of these original authenticities.
Second, American culture is consumer culture. One needs to be clear on this: “The American
Dream” is directly tied to bourgeois tendencies to acquire more “objects” – more “stuff;” here,
because we surround ourselves with excessive simulacra, we live our daily lives within
simulation, and as we establish ourselves in a “disposable culture,” we also embrace the notion
of an ahistorical frame of reference. Baudrillard (1988a) claimed, “Today the scene and the
mirror have given way to a screen and a network. There is no longer any transcendence or depth,
but only the immanent surface of operations unfolding, the smooth and functional surface of
communication” (p. 12). When we communicate through the screen, we find ourselves in the
absence of originality (of “real” interaction), immersed in code – the model of hyperreality. An
illustration of this idea can be seen in the film *The Matrix*. As people spend more time online –
that is, as people spend more time immersed in simulated virtual spaces – the lines between
“reality” and “hyperreality” begin to blur. The seduction of simulation, then, in *The Matrix* is
responsible for Neo’s initial skepticism when approached by Morpheus and his crew. Because
Neo has given himself up entirely to simulation, he is unwilling to believe that his virtual “life”
in the matrix) is a simulation; it is only after Neo takes a “leap of faith” and follows Morpheus
that he begins to see the limitations of the simulation and the possibilities of “reality.”

Baudrillard (2007a) warns that our daily lived experiences are already governed by simulation:
“The technical fine-tuning here is perfect. There is no room for fuzziness, tremor or chance” (p.
28). In other words, our simulated lives can become “perfect” through the screen; in simulation,
we are complete – we are, in other words, hyperreal – but in the end, it may be that we also
undergo a transformation of consciousness. When we go online, we live spectrally; that is to say,
if we consider simulation as “in-between” spaces, then we operate daily within liminality. The
hyper-realization of our being-in-time exposes new existential crises; for now, we give ourselves
up to our fate as outlined by Baudrillard (1999/2001):

> Reality is growing increasingly technical and efficient; everything that can be done is
being done, though without any longer meaning anything… As for the sign, it is passing
into the pure speculation and simulation of the virtual world, the world of the total screen,
where the same uncertainty hovers over the real and ‘virtual reality’ once they go their
separate ways. The real no longer has any force as sign and signs no longer have any
force of meaning. (p. 5)

There is hope: in a world where there is no meaning, education is more crucial than ever.

Baudrillard (2007a): “…interactivity threatens us on all sides. What was once separated is
everywhere merged” (p. 75). What is threatened? Identity, gender, race, sexuality, ethnicity, socioeconomic status, notions of the state: as we are sucked into the screen, Baudrillard suggests that we suffer the effects of interactivity – that we are merged, we suffer from sameness. What we, as historical beings, have been unable to do for centuries, Baudrillard claims has been accomplished in the space of just decades. We have, for the first time in history, become one human race, governed by code generated simulation, seduced by that sameness to the detriment of the individual self, but, according to Baudrillard (2007a), we have also moved beyond the tensions generated by our divisions, our isms: “Wherever a mingling of this kind – a collision of poles – occurs, then the vital tension is discharged” (p. 75). In simulation, embodied reality is no longer the central consideration. Hyperreality becomes its own ontology. Baudrillard (1983):

> This is where simulation begins. Everywhere, in whatever political, biological, psychological, media domain, where the distinction between poles can no longer be maintained, one enters into simulation, and hence into absolute manipulation - not passivity, but the non-distinction of active and passive. (pp. 57-58)

The question is disturbing: because simulation renders distinction impossible (between poles, between active and passive, between the forces of our daily lives), does truth become impossible as well? Increasingly, as we give up more of ourselves to simulation, the human experience is limited as originality – that is, “reality” – is problematized. Again, the lines between “real” and “virtual” become blurred. Being itself is problematized in our code-generated sameness. Ontological movement ceases.

The case that Baudrillard (1990/2009) makes is angst-ridden, as the encompassing void of simulation is comprehensive:

> Ours is rather like the situation of the man who has lost his shadow: either he has become transparent, and the light passes right through him or, alternatively, he is lit from all angles, overexposed and defenceless against all sources of light. We are similarly exposed on all sides to the glare of technology, images and information, without any way
of refracting their rays; and we are doomed in consequence to a whitewashing of all activity – whitewashed social relations, whitewashed bodies, whitewashed memory – in short, to a complete aseptic whiteness. Violence is whitewashed, history is whitewashed, all as part of a vast enterprise of cosmetic surgery at whose completion nothing will be left but a society for which, and individuals for whom, all violence, all negativity, are strictly forbidden. In these circumstances everything which is unable to relinquish its own identity is inevitably plunged into a realm of radical uncertainty and endless simulation.

(pp. 49-50)

There is much to unpack here. First, the notion of the transparent human: in simulation, we lose our inner-being; we are plunged into the sameness of simulation without hope for individual identity – stripped of that which makes us persons – defenseless against the environment. In an Ellisonian sense, simulation presents us with the universal invisible human. And why not? Is not the seductive promise of simulation the ecstasy of homogeneity? That we are able to “be” who or whatever we want to be in virtual spaces? What, in a 20th century sense was a lamentable social narrative (vis-à-vis invisibility) has, in the 21st century, become a provocative one. Perhaps, in a post-industrial, post-modern, post-information (posthuman) world, the tempting nature of invisibility and sameness is too strong to resist. Overwhelmingly, young people embrace this sameness (or, at least, they do not move to resist it, perhaps unable – or unwilling – to recognize the inherent value of their own personness) of simulation as a means of “fitting in” – of being part of the conversation of the connected present.

Second, to the notion of whitewashing. It is no accident that Baudrillard chooses “white” – the color which reflects everything – as opposed to black, which absorbs everything. To be doomed to aseptic whiteness, then, one imagines a space whereby all else is pushed away – again, back to our radical sameness in simulation – rendering it impossible for the individual to be affected by anything else. All is reflected, all is rejected, all is made the same. Think in terms of the influence that the screen has on our collective daily lives: reality television, 24-hour news
channels, social networking (accessible anytime, anywhere with your smart phone or tablet),
global stock market activity; we are constantly tuned in. An interesting historical analogy:
Timothy Leary’s “turn on, tune in, drop out” takes on an entirely different meaning here – when
lured by the seduction of the screen, we drop out of our embodied selves, give up our humanness,
and succumb to the whitewashing of our basic primordial experience. We are led forward by the
outside forces of programming, eliminating the need for thought or a critical self-awareness. To
what end? Baudrillard suggests a society in which all is forbidden; that is, all individual agency
is forbidden, anything that would flex the muscles of uniqueness and assert human dignity. After
all, asserting individual agency in the age of simulation is ultimately a futile effort, as to do so
would bind one to Baudrillard’s radical uncertainty – a 21st century existential crisis – a banal
strategy of individualism with no possibility for a meaningful result. In no uncertain terms,
Baudrillard tells us that resistance is useless. We have arrived at the age of simulation. We have
cast ourselves off into a sea of uncritical sameness built on a foundation of consumerism.
Endless simulation. Welcome to the era of posthumanism.

What are we to “learn” from this state of simulation? What is our fundamental question

So the world, then, is a radical illusion. That is, at least, one hypothesis. At all events, it is
an unbearable one. And to keep it at bay, we have to realize the world… take from it its
secret, arbitrary, accidental character, rid it of appearances and extract its meaning, divert
it from all predestination and restore it to its end and its maximum efficacy… This
gigantic enterprise of disillusionment – of, literally, putting the illusion of the world to
death… is what is properly meant by simulation. (p. 17)

Indeed, an intensely problematic proposition. First, to keep the world at bay, we must realize it.
How does this happen? How might one extract meaning from the world, especially as one is
consciously aware of the implications of simulation? Perhaps it is enough to do as Baudrillard
suggests and to put the illusion of the world to death. In other words, we should simply accept, embrace, and acknowledge the limits of our hyperreal present and abandon hope for change moving into the future. This is a rather foreboding proposal for the 21\textsuperscript{st} century: we have been judged as inconsequential beings, rendered irrelevant, usurped by simulation. We have given ourselves over to the ecstasy of the same. Simulation triumphs. Nonetheless, perhaps there is a bit of ironic optimism, a defeatist silver lining: the enterprise of disillusionment might be a liberating experience inasmuch as it keeps one from any absurd notion of productive action.

Baudrillard (2010c) theorizes that, indeed, within simulation rests the fate of the world; that new hegemonies and, perhaps, a new world order is taking shape:

First, in the name of universals, the West imposes its political and economic models on the entire world along with its principle of technical rationality… Beyond economics and politics, its quintessence relies on the hold of simulation, an operational simulation of every value, every culture – that is where hegemony today asserts itself… Underdeveloped countries keep aligning themselves on a simulacrum of development and growth; they get their independence from a simulacrum of democracy, and every endangered culture dreams of a staged rehabilitation – all fascinated by the same universal model… Thus, after imposing its domination through History, the West is now imposing its hegemony through the FARCE of History. Global power is the power of simulacrum. (p. 66)

In Chapter 4, an investigation into the development of the Internet will show the central role that the West has played in the creation of the Internet and the World Wide Web. Again, it is not conspiratorial to trace this genealogy from ARPANET (the first U.S. military communications network) to the work of Tim Berners-Lee, who created the World Wide Web in 1991. Beyond the proliferation of the Web, which in many ways ushered in the viral growth of simulation (plunging the global populace into the screen), things can become a bit more complicated.

A second key tenet of hyperreality is ephemerality. Here, we turn to the unrelenting barrage of information. We might begin with McLuhan (1964/1994):
In a culture like ours, long accustomed to splitting and dividing all things as a means of control, it is sometimes a bit of a shock to be reminded, that, in operational and practical fact, the medium is the message. This is merely to say that the personal and social consequences of any medium – that is, of any extension of ourselves – result from the new scale that is introduced into our affairs by any new technology. (p. 7)

An explication of the shift from the humanist era to the posthuman era should begin with the dominant medium. In this case, if we think of the first decade of the 21st century, we might think in terms of the screen. The new millennium gave birth to an explosion of high-speed access and connectivity as well as growth in handheld devices, all of which are experienced through the screen. Wireless devices essentially moved the tradition of television into one’s pocket for easy (constant) access. More specifically, however, we might think in terms of crisis on the screen. After all, the dominant narratives of the fin de siècle were certainly situated around spectacle and, in many ways, panic and fear. The hype surrounding Y2K quickly subsided as a crisis averted only to be followed shortly thereafter by the spectacle of the 2000 presidential election between George W. Bush and Al Gore. The nation turned its eyes toward its screens, following the continuous rush of reports and influx of information, turning inward all the time.

The critical moment, however – that is, what the future may very well deem as the beginning of a new paradigmatic moment – was September 11, 2001. The terror unleashed on Lower Manhattan and Washington, D.C. was orchestrated for maximum viewer impact. It was no coincidence. The impact of the first plane on Tower 1 focused all eyes on the unfolding disaster; then, once the world was watching, the second plane hit Tower 2. These moments, plus the moments of each tower’s collapse, were replayed repeatedly throughout the day and, indeed, the weeks and months after. Despite the sheer horror of this day, attention quickly turned to “what’s next” – the beginning of the war in Afghanistan, the search for Bin Laden, the search for weapons of mass destruction and the invasion of Iraq… By 2005, eyes turned to Hurricane
Katrina and the devastation of New Orleans. In 2007, the Virginia Tech massacre. In 2008, the financial crisis. In 2009, swine flu. In 2010, the earthquake in Haiti. In 2011, the earthquake in Japan. Plunging ever-faster, news headlines are “pushed” out to mobile devices (please note – it is no accident that this word has been chosen for the delivery of news headlines to mobile devices; headlines are, in fact, “pushed” out to your screen – information forcefully thrown your way). We are well served here to remember McLuhan’s (1964/1994) notion of the age of apathy and the irony of these moments of crisis: “…the age of anxiety and of electric media is also the age of the unconscious and of apathy” (p. 47). In hyperreality, we are transfixed by the suffering unfolding on the screen, but only until the next crisis takes over. Compassion fatigue sets in; we can only handle one crisis at a time – that which is receiving the most coverage. Welcome to the age of ephemerality.

Neither Baudrillard nor Umberto Eco\textsuperscript{14} explicitly discusses ephemerality as a key tenet of the hyperreal experience, but it is certainly implied at every turn. Ephemerality begins with the consumer society and its infatuation with consumptionism. In no unclear terms, Baudrillard (1970/2010a) claimed “‘Affluence’ is, in effect, merely the accumulation of the signs of happiness” (p. 31). The “signs,” of course, are nothing more than the “stuff” of our daily lives as previously suggested; in other words, the American Dream necessitates the accumulation of material wealth (after all, how can you show your affluence without accumulating objects?). In turn, we are met with the image of insatiable humanity, which has a constant need for more – an overconsumption of goods with each passing day. The American Dream, inasmuch as it constitutes a need for material wealth, requires the mass production of goods to satisfy the masses. Ergo, as mass production perpetuates the phenomenon of “copies of copies,” “reality” is

\textsuperscript{14} Umberto Eco (born 1932) is an Italian philosopher and author best known in the U.S. for his 1980 novel \textit{The Name of the Rose}; however, he also published a collection of essays under the title \textit{Travels in Hyperreality} in 1983.
problematic in terms of the loss of originality. Thus, though its genealogy certainly extends further into the past, the birth of the American Dream also marked the death of reality and the birth of hyperreality.

In youth culture, consumptionism is directly tied to technology. Eco (1967/1986) suggested that, in the hyperreal world, “…the sense of fullness, the obsessive determination not to leave a single space that doesn’t suggest something, and hence the masterpiece of bricolage, haunted by *horror vacui*, [is] achieved” (p. 23). In other words, as we surround ourselves with gadgets (satiating every space around us; constantly connected), we are overcome by hyperreality. Being, in this sense, is complicated as the individual takes a secondary role to the technology that governs our daily lived experiences. Certainly, this phenomenon is not unfamiliar: the adolescent with wires dangling from the ears, head down, gadget in hand, thumbing away at the screen, laptop to the side, etc. In speaking of young peoples’ current infatuation with technology, Baudrillard (2000/2002a) made a frightening suggestion:

> The child has a special relationship with the instantaneous. Music, electronics, drugs – all these things are immediately familiar to him. Psychedelic isolation does not frighten him. Where real time is concerned, he is way ahead of the adult, who cannot but seem a retard to him, just as in the field of moral values, he cannot but seem a fossil. (p. 104)

Have we, as Baudrillard insinuates, become fossils if we are, in fact, frightened by this notion of psychedelic isolation? Should we attempt to resist the forces at play here (or, is it even possible to feign resistance)? Is there any hope in assuming that there is an audience of young people that actually wishes to engage in discourse on life in the space of hyperreality? Youth and technological consumer culture present an interesting anthropological opportunity: visualize the “connected” young person in his native habitat: bedroom / dorm room / apartment. Rideout, Foehr, and Roberts (2010) reported
Over the past five years, young people have increased the amount of time they spend consuming media by an hour and seventeen minutes daily, from 6:21 to 7:38 – almost the amount of time most adults spend at work each day, except that young people use media seven days a week instead of five. Moreover, given the amount of time they spend using more than one medium at a time, today’s youth pack a total of 10 hours and 45 minutes worth of media content into those daily 7½ hours – an increase of almost 2½ hours of media exposure per day over the past five years. (p. 2)

Here, one sees Eco’s “horror vacui”: the saturation of every space by technology. As we shall discuss later, in both this chapter and in subsequent chapters, this phenomenon is a central problem facing higher education in the very near future, but it is not necessarily the fault of the young people who are consuming technology. They are simply born into this space. By the time they arrive at university, the damage has been done. Their humanness has been fractured, as suggested by Baudrillard (2007c):

> It is here we see that the mode of disappearance of the human… is precisely the product of an internal logic, of a built-in obsolescence, of the human race’s fulfillment of its most grandiose project, the Promethean project of mastering the universe, of acquiring exhaustive knowledge. (p. 16)

Because humanity barrels forward into the future – always seeking more – always attempting to master the universe, the mind is launched into hyperdrive, lost in a sea of information framed within posthumanism. At worst, this Promethean project has cost us our most basic connection – with one another. Baudrillard and Nouvel (2000/2002) claimed, “now I think we’re beyond happiness… We no longer ask if we’re happy or not. Within a network, you’re simply part of the chain, and you move from one terminal to another” (p. 30). It is why, in higher education, the 500-seat auditorium is a clear manifestation of the problem of hyperreality. A student notices when the professor knows his or her name. The student becomes more invested in the educative process. The student feels valued.

Of course, the problems reach beyond the classroom. Ephemeralism is everywhere; young
people especially are immersed in it. The effects are rooted, however, in the very passage of time (or, at least, in the perception of the passage of time). Again, hyperreality presents us with a problem: the passage of time depends on the passage of signs. The passage of signs is tied to the dominant medium. To this end, Baudrillard (1988a) stated, “Today our only architecture is just that: huge screens upon which moving atoms, particles and molecules are refracted. The public stage, the public place have been replaced by a gigantic circulation, ventilation, and ephemeral connecting space” (p. 20). This ephemeral connecting space can be tied back to our previous discussion of headlines and compassion fatigue. Our daily lived experiences have become exercises in refraction as we are bounced around from the latest “happening” to the next, always holding onto our gadgets. The World Wide Web has succeeded in doing that which Baudrillard (2000/2002b) suggested:

The information superhighways will have the same effect as our present superhighways or motorways. They will cancel out the landscape, lay waste to the territory and abolish real distances. What is merely physical and geographical in the case of our motorways will assume its full dimensions in the electronic field with the abolition of mental distances and the absolute shrinkage of time. (p. 58)

Because one can “experience” phenomena directly through gadgets, hyperreality does exactly this – abolishes mental distances and results in the shrinkage of time. Time, for those colonized by hyperreality, becomes ahistorical – mired in uncritical presentism – reduced to the latest updates of the social network, the headline crawling across the screen. It is a spectacle that was predicted by Baudrillard (2003), “In such a world, what we have is not communication, but contamination of a viral type; everything spreads from one person to another in an immediate fashion” (p. 28). We see this with each passing day. Viral culture is now a firmly entrenched part of our hyperreal existence. It is an interesting notion: that an event can “go viral” online. Of course, the troubling fact here is tied back to the definition of “viral.” A virus is an infection, a
disease. In terms of viral culture, have we begun to witness the death of creativity and individuality? As we turn to the screen, infected by viral matter (“you MUST see this…”), we are experiencing life through the viral snippet of the moment. The templates that exist on social networking and other sites on the Web force the user to conform or else be excluded. Baudrillard (1999/2001) posited “Reality is growing increasingly technical and efficient; everything that can be done is being done, though without any longer meaning anything” (p. 5). In other words, in a life of viral matter and template culture, we are (again) reduced to radical sameness. Here, one begins to see the problems facing undergraduate education as we move into the future: efficiency implies speed; without time for reflection, how might students develop the ability to think for themselves?

Regardless, the road to technical efficiency is filled with discordant interruptions. Ephemerality is a problem for us because our sense of time is complicated, our very sense of history. Baudrillard (1981/1994) proposed:

> History is our lost referential, that is to say our myth. It is by virtue of this fact that it takes the place of myths on the screen… The great event of this period, the great trauma, is this decline of strong referentials, these death pangs of the real and of the rational that open onto an age of simulation… all previous history is resurrected in bulk – a controlling idea no longer selects, only nostalgia endlessly accumulates: war, fascism, the pageantry of the belle époque, or the revolutionary struggles, everything is equivalent and is mixed indiscriminately in the same morose and funereal exaltation, in the same retro fascination. (pp. 43-44)

Moving forward, one cannot help but wonder what might become of the development of agency within a generation of young people whose conception of history is (as Baudrillard suggests) an accumulation in funereal exaltation. The problem for the educative process, and especially on the fate of the humanities and liberal arts, is essential. It is simply a problem of context – one cannot know where one is without first knowing from whence one has come. This underlying
foundation of context is necessary across disciplines and majors. Humanity cannot exist without contextual bases. Or, perhaps we should say, humanity should not exist without contextual bases so that we might not be doomed to repeat the mistakes of the past; however, inasmuch as Web culture has been a “democratizing” force, offering platforms to the masses, it has also in many ways problematized hierarchies, narratives, myths, and even values. Again, back to the notion of template culture and radical sameness, has the Web complicated our traditions / histories / narratives? If so, perhaps the work ahead should be focused on ways in which we might recognize those traditions and on breathing new life into the human experience. This will be considered in later chapters.

Reductionism has particularly acute implications for the educative experience and for the question of being human. The discourse is shaped by the structures of the posthuman moment, where reductionism is a manifestation of the hyperreal – especially vis-à-vis the ubiquitous appearance of gadgets and increased time spent “connected.” Extensionism—that is, the use of technology as an extension of the self—leads to reductionism, inasmuch as it impedes “live” social interaction and (ironically) alienates us from one another.

Above all, hyperreality presents us with a troubled modernity where the ability to think critically is problematized, and these problems are systemic. The current infatuation with Science, Technology, Engineering, and Mathematics (STEM) in the United States is largely responsible for the reduction of the human experience by diminishing everyday phenomena to the level of statistical significance. This is nothing more than a 21st century déjà-vu reminiscent of the Sputnik revolutions of the late 1950s, only this time, according to Baudrillard, there is a critical delusion that underlies the conversation. In a global race for scientific achievement, the United States simply does not have the numbers to win. China and India – each with over a
billion citizens – have far more scientific geniuses waiting in the wings than the U.S. has as a total student population. Aravind Adiga’s 2008 novel The White Tiger suggested that the 21st century will be led by the Eastern hemisphere, and in terms of sheer population, Adiga may be correct. There are absurd challenges thrown around – the stuff of political fodder – concerning the future importance of education in the U.S. IQ scores have risen since the 1960s, but one often hears senior faculty in higher education speaking of the expectations that younger students have in terms of negotiating for grade inflation and general resistance to rigorous classroom discourse. This shift in expectations is, in part, the result of our hyperreal situatedness. Bauerlein (2008) said, “…teenagers and 20-year-olds appear at the same time so mentally agile and culturally ignorant. Visual culture improves the abstract spatialization and problem solving, but it doesn’t complement other intelligence-building activities. Smartness there parallels dumbness elsewhere” (p. 95). As discussed later in this chapter, resistance on the part of students may not necessarily be laziness or indifference as much as the reprogramming of the brain over the past few decades. For now, however, we turn to reductionism.

First, in hyperreality, the problem of reductionism is inescapable primarily because we are immersed in code, as posited by Baudrillard (2007a), “There is no separation any longer, no emptiness, no absence: you enter the screen and the visual image unimpeded. You enter life itself as though walking on to a screen. You slip on your own life like a data suit” (p. 75). Of course, Baudrillard here is speaking directly to the Singularity, where man and machine merge. This type of extensionism does, in fact, reduce the human to the level of code as communication is reduced from that of the spoken word to that of data on the screen. It is the great irony of the technological age: we feign control over our machines when it is actually us ourselves, in fact, who are collapsing into the matrix – becoming limited, becoming diminished. What’s worse is
that it is affecting not only our own spheres of being but it is also reducing those around us with whom we come into contact. Baudrillard (1988b) suggested

The Object, then, is always already a *fait accompli*. It is without finitude and without desire, for it has already reached its end. In a way, it is transfinite. The object is therefore inaccessible to the subject’s knowledge, since there can be no knowledge of that which already has complete meaning, and more than its meaning, and of which there can be no utopia, for it has already been created. This is what makes the Object a perpetual enigma for the subject. This is what makes it fatal. (pp. 88-89)

Beyond ourselves, the Object (consider here other people as well) is also reduced to meaningless data. Think in terms of how incoming college freshmen are labeled. “I am a 34 on the ACT.” “I am a 1500 on the SAT.” “I am a 3.856 GPA.” “I am a scholarship recipient.” “I am a Business major.” No wonder young people are experiencing a crisis of conscience; they have an endless array of labels that offer no help in situating their own existential situations. Perhaps this is why so many of them turn inward to their technology, again, reduced to nothing more than code, unable to project an identity beyond their gadgets, lost in a sea of ennui. It is what Baudrillard (1970/2010a) called the

*tragic* paradox of consumption. Everyone wants to put – believes he has put – his desire into every object possessed, consumed, and into every minute of free time, but from every object appropriated, from every satisfaction achieved, and from every ‘available’ minute, the desire is already absent, necessarily absent. All that remains is *consommé* of desire. (p. 152)

One can hardly argue with Baudrillard on this. Try this: next time you are in a public space – a street corner, an airport, a city bus, a shopping mall – glance around at the people near you and count the number of those who are not immersed in some form of technology. The ubiquity of it confirms the feigned desire of which Baudrillard speaks; regardless, we give ourselves over to it entirely because, after all, what else would we do if we did not have our gadgets to consume us?

In the posthuman era, as reductionism limits the possibilities of your very existence, you find
that you are less human, but this is not necessarily a problem, as long as you can still “plug in.”

In a poignant and insightful passage, Baudrillard (1970/2010a) claimed

In the generalized process of consumption, there is no longer any soul, no shadow, no double, and no image in the specular sense. There is no longer any contradiction within being, or any problematic of being and appearance. There is no longer anything but the transmission and reception of signs, and the individual being vanishes in this combinatory and calculus of signs. Consumer man never comes face to face with his own needs, any more than with the specific product of his labour; nor is he ever confronted with his own image: he is immanent in the signs he arranges. There is no transcendence any more, no finality, no objective: what characterizes this society is the absence of ‘reflection,’ of a perspective on itself. (pp. 191-192)

Consumer man, then, as he operates as an entity reduced by his own situatedness in hyperreality, limited by an inability to transcend – a mere sign – takes on a new identity entirely: one that Baudrillard called “homo fractalis.” In this same vein, Foucault (1988b) reflected on the nature of being:

The general framework of what I call the “Technologies of the Self” is a question which appeared at the end of the eighteenth century. It was to become one of the poles of modern philosophy. This question is very different from what we call the traditional philosophical questions: What is the world? What is man? What is truth? What is knowledge? How can we know something? And so on. The question, I think, which arises at the end of the eighteenth century is: What are we in our actuality? …I don’t pretend that the previous questions about truth, knowledge, and so on have to be put aside… But I think that a new pole has been constituted for the activity of philosophizing, and this pole is characterized by the question, the permanent and ever-changing question, “What are we today?” And that is, I think, the field of historical reflection on ourselves. (p. 145)

This new pole – the ever-changing question – that speaks to modernity is central to our efforts at understanding being in the era of hyperreality. As globalization marches forward, technology continues to transform our world. There are new discursive problematics as we seek to control the flow of information on the Internet and the capitalist-driven urge for young people to constantly update their lives – plugged-in for nearly every waking moment. As Baudrillard (1986/1999) explained, these complex postmodern crises of identity are obvious “everywhere,
whether in regard to the body or the mental faculties, you find the same blank solitude, the same narcissistic refraction” (p. 34).

At this historical moment, when broadband access has given us the opportunity to create multiple digital identities, we are presented simultaneously with the possibilities of overcoming the structures of our “isms” and with the limitations of hyperreality. Homo fractalis is a very real manifestation of the problems presented by hyperreality inasmuch as it exposes the confines of being. The floodgates of opportunity have been opened, and yet our existential crises have multiplied. It is not even as Foucault suggested, “What are we today?” but rather, “What are we in this moment?” As ephemerality leads over to the reduction of the human experience, we are able to see how we arrived at this complicated situation vis-à-vis our trends and gadgets – texting, social media, eReaders, smart phones, etc. In embracing the hyperreal experience, we cultivate cultural norms that expect (at the very least) people to be part of the conversation. To be disconnected, in this sense, is to not exist at all; thus, the circulation of cultural meaning ends where connectivity ends. For young people, if you are not a part of the connected community, you are no one. You are not part of the conversation. You do not exist. In the end, Baudrillard (1999/2001) suggests that one should not even attempt to feign identity:

> Identity is a dream that is pathetically absurd. You dream of being yourself when you have nothing better to do… Today we no longer fight for sovereignty or for glory, but for identity… Now, all energies – the energies of minorities and entire peoples, the energies of individuals – are concentrated today on that derisory affirmation, that prideless assertion: I am! I exist! I’m alive, I’m called so-and-so, I’m European! A hopeless affirmation, in fact, since when you need to prove the obvious, it is by no means obvious. (p. 52)

Is it possible, then, that in an effort to resist reductionism we have plunged deeper into the abyss of the fractured subject? That by creating these multiple identities, we have alienated ourselves even more significantly? Baudrillard (1988c):
Formerly we were haunted by the fear of resembling others, of losing ourselves in a crowd; afraid of conformity, and obsessed with difference. Today, we need a solution to deliver us from resembling others. All that matters now is only to resemble oneself… Resemblance is no longer concerned with others, but rather with the individual in his vague resemblance to himself; a resemblance born of the individual’s reduction to his simple elements. As a result, difference takes on another meaning. It is no longer the difference between one subject and another, but an internal, infinite differentiating of the same. Fatality today is of the order of an interior giddiness, of an explosion of the identical, of the “narcissistic” faithfulness to one’s own sign and to one’s own formula. One is alienated from oneself, from one’s multiple clones, from all these little isomorphic “I”s… (pp. 40-41)

The fractal subject, then, becomes what might be considered as the grossest manifestation of the hyperreal dilemma: what happens once it is you yourself that becomes a victim of the meticulous reduplication of the real? We see it everywhere from social networking to virtual worlds; reinventions of the self; multiple accounts on multiple Web sites; the fractal subject revealed; homo fractalis aeternum. As we move more deeply into the posthuman era, and as the global population becomes more connected, the problem promises to become more pronounced, as suggested by Baudrillard (1981/1994): “It is thus the masses who assume the role of catastrophic agent in this structure of catastrophe, it is the masses themselves who put an end to mass culture” (p. 66).

Epistemology & posthumanism

Ways of knowing in the era of posthumanism can be rather consumed by cynicism, as presented by Baudrillard (1976/2007b): “Contemplation is impossible, images fragment perception into successive sequences and stimuli to which the only response is an instantaneous yes or no – reaction time is maximally reduced” (p. 63). In hyperreality, critical thought – that is to say, the ability to reflect on and discern one’s sense of meaning and existence in the knowable (and unknowable) universe – becomes impossible; without critical thought, we are doomed as humans as we are reduced to the life of a passive cybernetic organism. Baudrillard (2010b)
suggested that hyperreality brings along with it an end:

The obsolescence of humans has reached its terminal phase. Their fate is definitively beyond their reach. In the end, human beings will only have been an infantile illness of an integral technological reality that has become such a given that we are no longer aware of it, except in its transcendental dimensions of space and time. This revolution is not economic or political. It is an anthropological and metaphysical one. And it is the final revolution – there is nothing beyond it. In a way, it is the end of history, although not in the sense of a dialectical surpassing, rather as the beginning of a world without humans. (pp. 79-80)

The implications of the Singularity will be the focus of Chapter 6, but it is a recurrent theoretical notion for Baudrillard. As we give up our own humanity, we are rendered useless by machines. Is this some far-off possibility, the stuff of science fiction? Or, is it a phenomenon that is nearer than we would like to admit?

Consider for a moment the following question: what does it mean to live in simulated space, where screen-culture embodies liminal living? Baudrillard (1995/2008) posited, “The great philosophical question used to be ‘Why is there something rather than nothing?’ Today, the real question is: ‘Why is there nothing rather than something?’” (p. 2). An interesting, if not hopeless, commentary on living in a hyperreal world; Baudrillard encourages us to take time to contemplate our cultural situatedness. In hyperreality – as the objects of our daily lives disappear into the periphery (meticulous reduplication of the real), what is left? How have we allowed this to happen? At what point did we begin to marginalize ourselves? Have we arrived at a time when information rather than discourse reigns supreme? The World Wide Web has provided opportunities to “show” (visually) what traditionally students have only read in books. One must be cognizant of what happens when the digitization of course content takes over for the synergistic exchange of ideas in the embodied classroom environment. In the hyperreal classroom, where these pedagogical events take shape, we are reducing thinking through
To speak of things that one wants to connote as real, these things must seem real. The “completely real” becomes identified with the “completely fake.” Absolute unreality is offered as real presence… the sign aims to be the thing, to abolish the distinction of the reference, the mechanism of replacement. Not the image of the thing, but its plaster cast. Its double, in other words. (p. 7)

On the one hand, it is empowering to be able to help students visualize course content. On the other, too often, the course stops with the visualization. Students are seduced by the information on the screen without actually developing opinions regarding the phenomenon being studied. What is central to the educative experience is the pursuit of wisdom – to learn how to think, not what to think. In other words, to live a life of the mind. Using Eco’s logic, the job of undergraduate education should be to recognize the completely fake and work towards a more critical daily experience. It is a key consideration for this investigation: how does one move from information to knowledge? It is a daunting task, complicated at every turn. Baudrillard (2007a) suggested “…as soon as you are in front of the screen, you no longer see the text as a text, but as an image” (p. 76). Even the most basic form of engaging with content – reading – is growing more difficult. With the proliferation of e-Readers, e-Books, etc., we move beyond the printed page and into code. We arrive, then, at yet another critical moment for Baudrillard (2007a):

And is there really any possibility of discovering something in cyberspace? The Internet merely simulates a free mental space, a space of freedom and discovery. In fact, it merely offers a multiple but conventional space, in which the operator interacts with known elements, pre-existent sites, established codes. Nothing exists beyond its search parameters. Every question has an anticipated response assigned to it. You are the questioner and, at the same time, the automatic answering device of the machine. Both coder and decoder – you are, in fact, your own terminal. This is the ecstasy of communication. (p. 81)

One again sees a manifestation of the impossibility of critical thought as human agency is given over to the machine, which essentially takes on the responsibility of making decisions for the
individual. If the ecstasy of communication is a result of pre-existing / automatic / anticipated responses, then one must question the necessity of the university in the posthuman era. It is easy to understand that the importance of this dialogue – that is, on hyperreality and ways of knowing in the posthuman era – cannot be overstated.

Baudrillard first published *The System of Objects* in 1968. Essentially a treatise on the sociological state of being in the era of mass media and technology, Baudrillard (2003) saw the 1960s as ushering in a new period where “the transition from the primacy of production to the primacy of consumption brought objects to the fore” (p. 3). The split here is crucial: as media grows and extensionism becomes more fully ingrained in the daily lives of the population, society’s central role moves from the production of objects to the consumption of objects. This is a key ontological consideration of hyperreality (as, genealogically, it effectively challenges the assumptions of the entire Industrial Revolution) but there are also key epistemological implications here as well. Before the 1960s, humanity’s traditional role centered on the production of goods to survive; after the 1960s, as people began to sacrifice individuality in favor of the objects (goods) that were marketed to them, the most central role of the individual became that of consumer. It was, for Baudrillard, the beginning of the end of reality. Ergo, this shift also indicated the beginning of the end of traditional ways of knowing.

The global concern of connectivity might have been most aptly addressed by Lyotard (1979/1984): “In the computer age, the question of knowledge is now more than ever a question of government” (p. 9). In a basic sense, because the infrastructure of technology requires governmental support in terms of funding, it follows that government can be the single most invested entity when considering connectivity, but corporations find ways to overcome the obstacles that lead directly to the people, assuming that said people can afford the gadgetry to
connect. Once the populace experiences the lure of simulation, the floodgates are opened, and it will be increasingly difficult for governments to “disconnect” once the infrastructure is in place. Lyotard (1979/1984), warned of government-controlled networks:

Knowledge in the form of an informational commodity indispensible to productive power is already, and will continue to be, a major – perhaps the major – stake in the worldwide competition for power. It is conceivable that the nation-states will one day fight for control of information, just as they battled in the past for control over territory… (p. 5)

Certainly, whereas connectivity empowers, so does it have the potential to corrupt, and in some instances, to oppress. It is a judgment that Siegel (2008) made when remarking on the claims of Internet supporters, “that they’re the champions of a new age of ‘demassification.’ By that, they mean that they’re allowing individuals to create their own cultural and commercial choices. But what they’ve really created is a more potent form of homogenization” (p. 67). This clearly speaks to the forces of simulation. Prospectively, this homogenization (simulated reality) could lead to tyrannical tendencies – mass hackings, cyberterrorism, identity theft, and so forth. Ferneding (2010) perceived a more dismal outlook on “humanity’s relationship to the flow, via the ir/rationality of technoscience, [which] is not so much to experience or understand, but rather to control” (p. 171). One begins to see that with simulation comes a mechanism for social control in light of homogeneity and sameness. Again, in Baudrillard’s words, global power is the power of simulacrum; as the forces of control intersect with the power of simulation, hyperreality exposes yet another ominous indication of modernity: when everything is at stake, suddenly nothing is.

In this void, then, how do young people experience knowing? Certainly, one way is through the educative processes of their daily lives. This includes formal schooling, but also expands to consider one’s primordial basic experience. Epistemology, then, requires an
examination of the implications of this hyperreal genealogical moment on the nature of education. Aside from the obvious repercussions of the consumerist model, which exposed growing trends in the commodification of educational systems, Baudrillard (1968/2000a) claimed, “…we are in effect at the level of a language here, and, by analogy with linguistic phenomena, those simple technical elements – different from real objects – upon whose interplay technological evolution is founded might well be dubbed ‘technemes’” (p. 7). The intersections are amazing. Language, marketing, media, commodification, and extensionism all converge here to witness the death of the individual and the rise of mass culture; essentially, the birth of hyperreality, where life becomes pure simulation through objects. Think in terms of advertising and education. Aside from public education, how does one choose a school? Location? Family legacy? Reputation (pause for reflection here – reputation is, after all, nothing more than marketing)? We assign language – whether willingly or unwillingly – to our institutions to lure new students. Typically tied to mission or identity (#1 party school! Truth and light! Critical thinking university! Etc.), the language is designed to promise an educational experience in exchange for the tuition dollar charged. This is clearly a manifestation of the consumer society, but also highlights a subsequent crisis in education. Ferneding (2010) warned of the forces at play, whereby technology “weakens the symbolic power of traditional sources of socialization (religion, values, political ideology) and creates a ‘secularization of society’ related to the dominance of commodity culture” (p. 177). Our daily lived experience, then, is being infected by the viral nature of the virtual. Frightening though this may be, it is important to recognize the fate of tradition; in hyperreality, we are headed down a road of sameness, witnessing the death of individuality and the rise of commodity culture as we go – again, back to the notion of ephemerality.
What are the implications of ephemerality, then, on epistemology? Especially when considering the fate of young people in the classroom, we might call this new phenomenon “the ennui effect.” If hyperreality presents us with a saturation of the senses – where a constant onslaught of information leads to staccato thought – then it is possible that hyperreality also renders critical thinking impossible. From the living room to the classroom, young people do not have time to think as they are subjected to this influx of input. As a result, it is often assumed that young people are indifferent or uninterested in the classroom experience, but again, this may be no fault of their own. By the age of 18, a young person is programmed to respond to the stimuli around them, and the expectation is that those stimuli will be constantly emerging. Eco first coined the term “cogito interruptus” in a 1967 essay; Baudrillard (2007a) conjured the phrase in examining phenomena that he noted pervades even cyberspace:

Every day thousands of sites die out on the Internet. What applied in the case of living beings over the course of evolution is continuing now in that of digital, genetic, cybernetic artefacts, doomed to disappear in droves to leave only a few of them, or their distant descendants along the digital chain. And we are only at the dawn of this ruthless selection process. In the order of artificial beings, we are at the stage occupied by bacteria in the order of life. (p. 179)

Perhaps ephemerality truly is in its infancy; perhaps we are helpless against the forces at play. However, one thing is certain: as young people become accustomed to these saturated lifestyles, ennui will continue to spread throughout the classroom. And why not? Beyond the educative experience, ephemerality pervades. Our personal and professional lives – as they rely on technologies that are always emerging – require us to constantly upgrade, constantly look to the future. Our consumerist inclinations make us feel guilty about not having the latest gadget or, at least, make us feel alienated. Baudrillard (1970/2010a) likened this to the French idea of “le recyclage,” in which one must “‘update’ their knowledge, their expertise – in short, their
practical range of skills… to which all individuals should normally adapt if they are to remain ‘up to speed’” (p. 100). One can hardly argue that this notion of constant improvement – however absurd – is not firmly ingrained in the culture of hyperreality. There is an expectation to always be moving forward, never taking time to stop. The problem, of course, is that a critical awareness of our human condition (critical thinking) requires one to pause and reflect. The picture is becoming clearer: if we value critical thought, and believe that it is an essential part of undergraduate education, then there remains more complicated conversations ahead for those of us in the academy. Eco (1967/1986) spoke of “the unhappy awareness of a present without depth” (p. 31).

This work of resisting this form of digital colonization is crucial, and it must start with very young children. Baudrillard (2000/2002a) suggested:

the child is no longer a child. Children are substitute beings, who are losing their natural otherness and entering upon a satellite existence on the artificial orbit of sameness. They will find it increasingly difficult to detach themselves; to find, not their identity and their autonomy – as they are constantly being told they must – but their distance and their strangeness… The current tempo, based on immediacy, acceleration, ‘real time,’ runs precisely counter to generation, gestation, the time of bearing and raising, the long haul in general, which is the duration of human childhood. The child is, then, logically condemned to disappear… Today, the general quickening of the pace of life condemns childhood to accelerated obsolescence. (pp. 103-104)

The very notion of childhood itself is in danger of being eradicated in favor of new subjectivities – a provocative claim. If, as Baudrillard suggests, children will find it difficult to detach themselves, and if the new (hyperreal) journey through childhood is one of isolation, the ripple effects will linger throughout primary, secondary, and higher education, and beyond through the lifespan. Epistemologically, then, the role of the educator in the posthuman paradigm should be to create ways for students to be distanced from hyperreality so that they might be able to discover and embrace their strangeness. Before young people can understand their own being
and then learn about themselves and their world, they must first be able to break away from the hyperreal – to resist the radical sameness of simulation – and to tease out the strands of strangeness that make youth possible.

The idea that, moving forward, childhood itself is at risk of becoming impossible should not be considered alarmist. Devore (1994) claimed “by age 6, the average U.S. child will have spent more time watching television than she will talk with her father in her lifetime” (p. 16). This was over a decade ago; since the invention of television parents have used media as a distraction for children and young people. We are only now witnessing the exponential acceleration of what was started in the 1960s. With the advent of Web 2.0 and the subsequent explosion of social networking, young people have turned inward. In social networking sites, the human experience – that is, the process of learning about one another, of communication with one another – is reduced to the level of the status update or the 140 character thought of the moment. The inward movement of hyperreality, therefore, reduces possibilities of knowing to nothing more than a series of abbreviated textual snippets; it is uncritical.

Young people in the United States are spending more than 50 hours per week consuming media, much of that online, and the social manifestations of hyperreality are a major contributing factor to the problem of ephemerality that can be seen in the cognitive development of young people. When examining the effects of time online in relation to cognitive development, one sees that there are changes in the way the brain processes information due to a process known as “neuroplasticity.” Essentially, the brain is reprogrammed to make sense of incoming stimuli in evolutionary fashion. Since the growth of the World Wide Web, youth have been bombarded by a constant stream of data, and their reading processes have changed. The result of neuroplasticity (in this case) is less critical reading. Carr (2010) maintained, “As brain science continues to
advance, the evidence for [neuro]plasticity strengthens... Virtually all of our neural circuits – whether they’re involved in feeling, seeing, hearing, moving, thinking, learning, perceiving, or remembering – are subject to change” (p. 26). Neuroplasticity, then, suggests that, over time, a young person’s brain is reprogrammed by the forces of (in our hyperreal world) constant stimulation. In other words, brain activity is constantly on the go, constantly seeking more input, constantly thirsting for more engagement. What happens, then, in a traditional undergraduate seminar or lecture course? Brain activity wanes. Quickly. Students either lose interest or sleep in class. Worse, students succumb to what some researchers have called “the Dopamine reward system” of technology, whereby young people find it physically challenging to ignore the vibrating phone during class time (or study time... or anytime). Think about this for a moment: what is the fate of learning in the hands of a generation who cannot (physically) focus for more than a few minutes (typically, less than 10 minutes) at a time? As soon as the phone dings / beeps / vibrates, the Dopamine reward system kicks in – the person must check to see what the notification is. A missed call? A new text message? A social networking update? Faculty in the academy are missing the point if they are dismissive of the notion of neuroplasticity. It is not simply adequate for an educator to claim that it is only his or her job to arrive in class and lecture when we see neuroscience research that claims that young peoples’ minds are becoming more unprepared for the rigors of college level discourse. Time online exposes people to lots of information, but only in a cursory way. Young people are not reading deeply, and thus are not thinking critically about what they read; this is only one example. Granted, Baudrillard’s theorizing presents a rather cynical view of technology in general. There is, however, great possibility in technology as well. Certainly, the advances in medical technologies have improved the lives of millions around the world. Innovations in transportation have brought food and water
to those who would otherwise be without, and have brought people closer to each other than in
the past. Corrales (2002) stated that “the Internet has begun to empower still-invisible
minorities,” and through the empowerment of those minorities comes what is, hopefully, an
opportunity for growth and respect (p. 40). Technology can enable the people who use it to assert
their own voices in ways that have not been previously possible, and in the context of our
globalized, digitized society, the lines that have historically existed in terms of communication
are increasingly blurred. The recent Arab Spring shows another example of how people can use
technology to send a commanding voice into the global community. All one needs is a cellular
phone capable of recording video, which, once uploaded to the Internet, is instantaneously
available to the world, and sheds light on the plight of those who are putting forth the message.
This egalitarian possibility is one that should not be overlooked. As the possibility of technology
is channeled – especially by grassroots organizations – to create spaces that seek positive social
change, it is arguable that we will continue to evolve towards the new universality that values
divergent views and multiplicities, while simultaneously raising awareness in global fora online.
Issues of scale of will not be a problem for the future of communications; when the world is at
one’s fingertips, the prospects are limitless. Also, for nations, the transformative nature of
connectivity can serve not only to better educate the people, but also to provide opportunity for
business and economic development, as well as aid in streamlining government activities. For
individuals, access increases literacies, provides a more attractive skill-set for prospective
employers, and ultimately, equates with upward mobility in regard to socio-economic status.
Still, if the current arc of progress is left unchecked, there is the possibility of a dystopian future
at the hands of technology, which will be discussed in Chapter 6.
Posthumanism & the role of education

Again, as mentioned early in this chapter, the genealogy traced takes us from Heidegger to McLuhan to Baudrillard in the transition from the humanist era to the posthuman era. Several theorists (Haraway, 1991; Gough, 1995; Hayles, 1999; Pepperell, 2003; Cooney, 2004; Seidel, 2008; Weaver, 2010a, 2010b) have suggested that life in the space of technology ultimately changes what it means to be human; in other words, in hyperreality, we become “posthuman.” Weaver (2010b) defined the posthuman in this way:

If the term posthuman has any connotations of “after” in its meaning, it is only referring to the end of the humanist definition of western man… The humanist term Western man also implies a separation and superiority between “man,” nature, and technology. Separated from nature and technology, the most commonly held belief was that since man was separate and superior from nature, it was within man’s purview to exploit nature as “Western man” deemed necessary… The posthuman condition challenges these assumptions. The lines between “Western man,” or now any type of man, no longer exist with nature or technology. In the posthuman condition humans return to nature and technology now enhances or enters into the human body. (p. 193)

Here, it is clear that hyperreality – inasmuch as it forcibly permeates the daily lived experiences of the human in the 21st century – has brought about a new humanism; hence, “posthumanism.” Technology, in this sense, has led to the death of traditional Western humanist notions; we are now presented with the (unpleasant? overwhelming? complicated?) opportunity to grapple with what comes next. Weaver (2010a) himself suggests, “When one adds the word ‘condition’ to the posthuman it… implies a state of being… When one enters into the ranks of the posthuman their relationship to the world and themselves changes” (p. 13). Posthumanity, when considered as both the intersection of human-machine relationships and in terms of the cognitive and moral spheres of relevance that come along with “living” online, frames a critical state of being – an indicator of our hyperreal situatedness. This critical state of being is informed by an ontology of emergent truths, a world responding to the dynamic forces involved in globalized society.
Succinctly, Pepperell (2003) questioned:

What is meant by the “posthuman condition”? First, it is not about the “End of Man” but about the end of a “man-centered” universe… Second, it is about the evolution of life, a process not limited to genetics, but which includes all the paraphernalia of cultural and technological existence… Third, posthumanism is about how we live, how we conduct our exploitation of the environment, animals and each other. (p. 171)

Here, we recognize that the issues are not necessarily new. Particularly in terms of the third point, there was the exploitation of the environment, animals, and each other before globalization and the age of simulation. Our attention in a world governed by the posthuman condition must focus on how technology complicates these relationships, what is made possible and impossible by these new and emerging technologies, and the fate of identities therein. There is, in fact, great possibility in the prevalence of this new technology, if we are able to harness its use to affect positive change in the world. Cooney (2004) claimed:

Like Plato and many of the world’s great religious teachers, some of the more fervently technophile members of cyberculture are prepared to give up on this world… and seek fulfillment in another and better world. They, too, would escape the current human condition by liberating our consciousness from the body to which it is now shackled. However, instead of going to a Platonic world of eternal forms, our minds would spend most or all of their time in virtual worlds. They would create a new level of reality sealed off from the trials and limitations of the socioecological, a level at which the laws of nature and governments would no longer burden us. Instead, we could choose from extensive menus of virtual environments and rules or laws governing them. (p. 42)

In hyperreality, if we are given different possibilities to explore lives that our physical worlds make impossible because of race, class, nation, religion, or gender, we might see new and interesting solutions to the problems of the physical world. There is potential, therefore, to be found in posthumanity, but there is also risk. This is the crucial intersection that gives us agency as educators in the space of technology: in a globalized world where constant connectivity makes virtual identities and posthumanity possible, how might we help re-shape undergraduate education to teach students to deal with the existential dilemmas of modernity? Young people
need to be reflecting on society, the social and technological forces that are emerging, and the complications of new subjectivities. In the end, one must consider the fate of humanity to be worth more than the seduction of the screen.

Weaver (2010a) suggested, “At its core the posthuman condition implies the merging of humans and machines in order to enhance or improve human capabilities. In a practical sense, the posthuman condition is an enhancement of natural human capabilities” (p. 11). This proposition of a human-machine harkens back to more traditional science fiction literature notions of the cybernetic organism, or cyborg. Posthumanity might be considered in terms of a philosophical investigation of the extension of the individual via technology (a movement outward from human to machine; an exploration) – rather than the cyborg whereby the human is physically altered by a prosthetic or technological appendage (a movement inward; an invasion).

Haraway (1991) defined “cyborg” as “a hybrid of machine and organism, a creature of social reality as well as a creature of fiction” (p. 149). This hybridity assumes the manipulation of the essence of the human by the addition of some technological part or machine. Yes, we live in times whereby biomedical engineering has done wonderful things for people who need these innovations, but in terms of the posthuman condition, this definition of hybrid is woefully incomplete. Haraway tells us that the cyborg lives in reality and hyperreality. What entity bridges both realities? The virtual manifestation of our humanness online through mechanisms of cyberculture… perhaps an avatar? Granted, as people spend more time online, these constructs of identity begin to blur the lines between real and hyperreal, thereby confusing the end of the human and the beginning of the avatar. As Pepperell (2003) suggested, “The general implication is that we can never determine the absolute boundary of the human, either physically or mentally. In this sense, nothing can be external to a human because the extent of a human can’t
be fixed” (p. 22). Here, it seems as though the avatar is made impossible by its inhumaness –
the human can still exercise free will and walk away from the machine. What is not clear,
according to Haraway (1991) is “what is mind and what is body in machines that resolve into
coding practices. In so far as we know ourselves in both formal discourse… and in daily
practice…, we find ourselves to be cyborgs, hybrids, mosaics, chimeras” (p. 177). Put differently
by Hayles (1999), “In the posthuman, there are no essential differences or absolute demarcations
between bodily existence and computer simulation, cybernetic mechanism and biological
organism, robot teleology and human goals” (p. 3). This definition of the posthuman as cyborg
remains problematic because the cyborg is not a person in and of himself or herself. The question
remains: once the human experiences this type of reduction, in our posthuman, hyperreal world,
does free will continue to exist? Levy and Murnane (2007) noted, “…computer substitution [for
human work] has its limits. Two of these stand out. An inability to represent information… An
inability to articulate rules” (p. 161). By reducing the human to the binary of if/then statements
or 0/1 of programming languages and computer code, the cyborg inhibits the human. Instead, the
conversation must move towards an examination of our human time spent online, and the
extension of our humanness in relation to the technologies that surround us. It is a phenomenon
best described by Pepperell (2003):

The posthuman conception of technology is that of an extension to human existence, not
of an external agent with a separate history and future… In short, humans cannot be
understood in isolation from the technological environment that sustains them. What
makes us human is our wider technological domain, just as much as our genetic code or
natural environment… This “extensionist” view of human nature, in contrast to the
humanist view, does not therefore make a distinction between the biological substrate of
the human frame (what is most often referred to as the “human”) and the wider material
domain in which we exist. In other words: where humanists saw themselves as distinct
beings in an antagonistic relationship with their surroundings, posthumans regard their
own being as embodied in an extended technological world. (p. 152)
It is possible that, moving forward into the future, the masses will soon be faced with a new challenge that will likely become more complicated with each subsequent generation: identity formation in “real life” versus that in “virtual life” as suggested in Chapter 1. Indeed, subjectivities are changing quickly, especially as liminal spaces provide opportunities for multiple constructs of the individual, hence the arrival of homo fractalis. In our code-generated modernity, Baudrillard’s (1990/2009) sarcasm screams loudly:

Surely the extraordinary success of artificial intelligence is attributable to the fact that it frees us from real intelligence, that by hypertrophying thought as an operational process it frees us from thought’s ambiguity and from the insoluble puzzle of its relationship to the world. Surely the success of all these technologies is a result of the way in which they make it impossible even to raise the timeless question of liberty. What a relief! Thanks to the machinery of the virtual, all your problems are over! You are no longer either subject or object, no longer either free or alienated – and no longer either one or the other: you are the same, and enraptured by the commutations of that sameness. We have left the hell of other people for the ecstasy of the same, the purgatory of otherness for the artificial paradises of identity. Some might call this an even worse servitude, but Telecomputer Man, having no will of his own, knows nothing of serfdom. Alienation of man by man is a thing of the past: now man is plunged into homeostasis by machines. (pp. 65-66)

Is the allure of gadgets so seductive that we are, as Baudrillard suggests, blind to the effects of homeostasis? This is perhaps the most troubling aspect of the posthuman era: as technology takes over, humanity is forced into code. Code, in no uncertain terms, consists of the simple binary of 0-1. As humans are immersed in code, then we are further colonized by our machines and a crisis of conscience appears that sends shudders through the soul: we live in an age of code-generated simulation (controlled by a fixed binary) – if the development of thought requires movement beyond binary relationships in an attempt to saturate the interstices of being, then, in the posthuman era, will we witness the “death” of the human? Chapter 5 will explore this question in more detail.

A frightening statistic: as of this writing, it is 2012. College freshmen this year were born
around 1993. Dial-up home Internet access was not introduced in any large-scale way until approximately 1995. We have not yet arrived at the age of “broadband babies” who will have been truly raised with instantaneous access. Watts (2008) posited “hyperreality concerns deceit and erasure in a media-generated world… does higher education ‘really’ take place?” (p. 141).

The task at hand requires a reimagining of undergraduate education in relation to our digital present. If, in the current system, students are learning at a surface level and essentially becoming nothing more than “deep generalists,” whose ways of knowing favor breadth over depth, can they be good stewards of, and contributors to, discourse? Again, as we seek to explore our existential experiences, the question must be central to mission of undergraduate education.

In the current model, where hyperreality governs our lives, Baudrillard (2000b) warned there exists “the horizon of a programmed reality in which all our functions – memory, emotions, sexuality, intelligence – become progressively useless” (p. 37). The very future of humanness – indeed, of humanity – is at stake.
As discussed in Chapter 2, Ignatian humanism was shaped by the tension that existed between theocentrism and Renaissance humanism; the fear for Ignatius was that of losing God, and the role of education was to inform subjectivity in light of the relationship between God and man. In the current shift from the humanist era to the posthuman era, there is again a critical tension between man and the unknowable; only this time, rather than spiritual or gnostic divine manifestation, subjectivity is challenged by commodified consumer culture and the digital devices that have made hyperreality possible. Before, subjectivity – that is, the notion of the self / human identity – promised “eternal life” from the God-man relationship (unitary through the divine); whereas now, there is effectively the question of life itself in terms of the man-machine relationship (which is fragmentary and fractured – nonunitary). As young people are exposed to simulated experience on the screen at earlier ages, they become passive agents – more machinelike. Mere objects. Moving forward, then, a new unknowable emerges: machines become smarter (that is, more humanlike and more active) and humans, through the processes of neuroplasticity and the reprogramming of the brain, become more machinelike (that is, more passive and less able to think deeply). In other words, subjectivity at this crossroads of time seems to hinge on what notions of humanness will survive these formative years. This chapter explores what I call the “discursive digressions” that plague society in the early 21st century. The data reviewed present complications that result from disjointedness between the governing forces of modernity and layers of complex webs of corporate structures in the global marketplace, all of which form the structure of what I call “hyperreal panopticism” – the system that speaks to the
apogee of Baudrillard’s notion of the Promethean project of mastering and controlling the world’s information. Anzaldúa (1987) suggested “culture forms our beliefs. We perceive the version of reality that it communicates. Dominant paradigms, predefined concepts that exist as unquestionable, unchallengeable, are transmitted to us through the culture” (p. 16). As the data will show, the communicated reality of the present moment reflects a culture that is tightly controlled, created and perpetuated by a small group of multinational / global conglomerate titans of industry whose ultimate goal is continual growth of the profit margin with no consideration at all for the fate of the individual. Subjectivity, then, is complicated by the hegemony of homogenized culture. The implications of such a system are fringed with existential angst, but there is still hope to come, as will be detailed in Chapter 6: the role of undergraduate education—specifically, the formation of a posthuman curriculum—is vital to unpacking the question of subjectivity and for restoring optimism in the posthuman era.

How does one begin to establish the frameworks of discursive digressions? Foucault (1997a) suggested

> discursive practices are characterized by the demarcations of a field of objects, by the definition of a legitimate perspective for a subject of knowledge, by the setting of norms for elaborating concepts and theories… Discursive practices… take shape in technical ensembles, in institutions, in behavioral schemes, in types of transmission and dissemination, in pedagogical forms that both impose and maintain them (pp. 11-12).

In terms of the demarcations of a field objects, for the purposes of this chapter, there are four threads that shape the perspective for a subject of knowledge: production, sign systems, power, and the self. These are taken from Foucault’s (1988a) four “types of technologies” that are critical to the realization of an individual’s skills and attitudes. Technologies of production, whose role is rather literal in the sense of creating or revising objects, will be examined from the lens of those companies who are global leaders in the computer hardware and software
industries. In this sense, the machines that result from production are nothing more than tools for people to use, not unlike historical tools (the wheel, farm equipment, hunting weapons, paper, etc.). The examination of technologies of sign systems, which make it possible to create and share systems of meaning and substance, is treated in light of the global network that governs the flow of information: the Internet. Technologies of power, inasmuch as it dominates the lives of individuals, is considered through the communications companies that govern access to the global networks. Finally, for Foucault, technologies of the self are those that pertain to the individual’s very existence vis-à-vis thoughts and deeds. In this case, there is a trifecta of industry-specific considerations that fall under the general theme of “time on the screen:” (1) media companies (television, magazines, and music) who command the majority of the waking hours of young peoples’ lives; (2) websites, where young people produce, consume, and, ironically, are “consumed” themselves; and (3) gaming companies, who create the virtual escapes and alternative universes that are currently so popular. Foucault (1969/2010) theorized

A discursive formation is not, therefore, an ideal, continuous, smooth text that runs beneath the multiplicity of contradictions, and resolves them in the calm unity of coherent thought; nor is it the surface in which, in a thousand different aspects, a contradiction is reflected that is always in retreat, but everywhere dominant. It is rather a space of multiple dissensions; a set of different oppositions whose levels and roles must be described (p. 155).

This framework provides a solid base from which these discursive digressions can grow, as it exposes the systems of power/knowledge as formulated by the institutions that govern and regulate the daily lived experiences of young people.

The goal of this approach is to reveal the multiple dissensions as they exist in the emergent space of constant connectivity and global flows of information and, later, to arrive at a reasonable examination of subjectivity in the shifting and intersecting chasm between the
humanist era and the posthuman era. Foucault (1977/1980c) posited, “truth is a thing of this world: it is produced only by virtue of multiple forms of constraint. And it induces regular effects of power” (p. 131). If one assumes that the multiple forms presented in the structure of this examination do, in fact, comprise modes of constraint, and, if those modes of constraint help to unveil the current governing power structures, then the examination will be successful in helping arrive at a fair assessment of truth and subjectivity as embodied by Foucault’s (1988b) “permanent and ever-changing question, ‘What are we today?’” (p. 145). To what end is this work begun? As suggested by Foucault (1977/1980c), “it’s not a matter of emancipating truth from every system of power… but of detaching the power of truth from the forms of hegemony, social, economic and cultural, within which it operates at the present time” (p. 133). Indeed, this entire investigation is concerned about the effects of technology on what it means to be human and on the nature of undergraduate education in the space of posthumanism. Young people should be cognizant that, as they negotiate new subjectivities in the space of digital technologies, they are also negotiating networks that are dominated by institutions that work to complicate truth through the hegemony of machines. Furthermore, though digital technology is not necessarily dehumanizing in and of itself, the systems of power that currently exist serve this end through the perpetual cycle of product launches and “recyclage.” Stated differently by Borgmann (1992), “expressions of distress should disquiet us because they indicate that we have no common life, that what holds us all together is a cold and impersonal design” (p. 3). Certainly, if a rupture is currently taking place (or, if one is on the horizon), it will (hopefully) be the result of a collective awakening to the realization of the cold and impersonal design of hyperreality.

Technologies of production

Again, for Foucault, technologies of production are those that allow the user to create or
alter objects, akin to the lineage of production tools (hammers, stucco, steam engines, etc.) throughout history. The question, then, becomes what are the dominant technologies of production for the posthuman era? And, of course, what discourse emerges from the consideration of said technologies of production? Arguably, the most dominant technologies of production that are utilized on a global scale are computers themselves – both hardware (the physical machines and peripherals: printers, keyboards, monitors, scanners, etc.) and software (operating systems, productivity suites, etc.). Borgmann (1999) claimed succinctly, “Computers furnish vastly increased information about and for reality… Whatever else computers may be in our culture, they… cushion and comfort the human condition. In some way they disburden us from having to cope with the contingency of reality” (p. 144). Aptly put, and quite an important distinction to make regarding the notion of about reality and for reality. To say that computers furnish information about reality is simple enough. As a production tool, a computer is a complex machine that receives input and produces output. Ergo, a massive body of information can be produced by these machines in terms of questions that require calculated answers. For instance: what were the 2010 census numbers for San Francisco, California? In what year did Walt Whitman write the poem, “I Saw in Louisiana A Live-Oak Growing”? What is the current stock price for Boeing? Ask the machine a question, get an answer. The second point Borgmann makes is a little more provocative, and plants the seed for this particular discursive digression. How is it that computers furnish information for reality? The choice of language here is key: to furnish information for something implies that there is an end implied in the action. To what end, then, are computers furnishing information, and what “reality” is produced as a result of that information? Here, it is easy to see the inherent power that is held by those who control these technologies of production, especially if computers are being utilized to affect control over the
very production of reality. The nuanced implication here is not a new one, as suggested by Feenberg (1991)

Early commentaries on the computerization of society projected either optimistic scenarios of social salvation or nightmares of impending dystopia. The optimists argued that computers would eliminate routine and painful work and democratize industrial society. The pessimists argued, on the contrary, that computers would put millions out of work and bring universal surveillance and control. (p. 91)

One could certainly argue here that there is a middle road to navigate between salvation and dystopia, but what is most interesting here is the recognition that this seed of discourse has been emerging as long as the computer has been around. The problem is really one of historical consideration: early computers were behemoths that were regulated for use by large corporations and governments. The personal computer did not arrive on the scene until the late 1970s and early 1980s, and the viral growth of the personal computer and subsequent gadgets (laptops, tablets, smartphones, etc.) did not begin until the 1990s and into the 2000s to the present day. Again, the shift to the posthuman era would have begun during this time, which places us collectively at the beginning of a new paradigm. It is why this investigation is timely and important, and brings the conversation back to Borgmann’s previous quote, as he suggested computers “cushion” and “comfort” the human condition – that these technologies of production “disburden” us from “having to cope” with reality. This notion of escapism was discussed in Chapter 3, and it has a new sense of urgency in terms of the discursive complications of technologies of production: it is an ironic imperative to note that, inasmuch as computers are being used to produce virtual realities for individuals that free them from the demands of physical realities, those same individuals are simultaneously becoming slaves to the machines that are supposed to be liberating them. In the end, one begins to see that those responsible for power/knowledge in an era where the fate of the masses is so (1) intertwined with the physical
production of computers and (2) dependent upon those machines to create reality are, for better or for worse, the proverbial “masters of the universe.”

The genealogical glance backward exposes the complicated history of the rise of these machines. As seen in Table 2 below\(^\text{15}\), the birth of the modern computer was the result of three moments: first, the need for governments and businesses to perform complex calculations in countries with rising populations (largely the consequence of the Industrial Revolution), second, the race for domination and competitive edge during the Second World War, and third, the subsequent race for domination and competitive edge during the Cold War. The history

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MACHINE / INNOVATION NAME</th>
<th>PURPOSE / NOTABLE FOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880s</td>
<td>Hollerith Tabulator</td>
<td>Automatic tabulation of census data</td>
</tr>
<tr>
<td></td>
<td>Atanasoff-Berry Computer (ABC)</td>
<td>Solving sets of linear differential equations</td>
</tr>
<tr>
<td></td>
<td>Bell Laboratories Model 1</td>
<td>Calculations involving complex numbers</td>
</tr>
<tr>
<td></td>
<td>Zuse Z-Series</td>
<td>General computing</td>
</tr>
<tr>
<td>1930s</td>
<td>Bush Differential Analyzer (Integraph)</td>
<td>Solving sets of differential equations</td>
</tr>
<tr>
<td></td>
<td>Electronic Numerical Integrator and Calculator (ENIAC)</td>
<td>General computing and ballistics research</td>
</tr>
<tr>
<td></td>
<td>Heath Robinson</td>
<td>Decryption of ciphers</td>
</tr>
<tr>
<td></td>
<td>Binary Automatic Computer (BINAC)</td>
<td>General computing</td>
</tr>
<tr>
<td></td>
<td>Electronic Delay Storage Automatic Computer (EDSAC)</td>
<td>In-flight navigation for airborne military use</td>
</tr>
<tr>
<td></td>
<td>Electronic Discrete Variable Computer (EDVAC)</td>
<td>General computing</td>
</tr>
<tr>
<td></td>
<td>Institute for Advanced Studies (IAS) Computer</td>
<td>General computing</td>
</tr>
<tr>
<td>1940s</td>
<td>Bombe</td>
<td>Decryption of German ENIGMA ciphers</td>
</tr>
<tr>
<td></td>
<td>Colossus</td>
<td>Decryption of ciphers</td>
</tr>
<tr>
<td></td>
<td>Electronic Numerical Integrator and Calculator (ENIAC)</td>
<td>General computing and ballistics research</td>
</tr>
<tr>
<td></td>
<td>Heath Robinson</td>
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</tr>
<tr>
<td></td>
<td>Electronic Discrete Variable Computer (EDVAC)</td>
<td>General computing</td>
</tr>
<tr>
<td></td>
<td>Institute for Advanced Studies (IAS) Computer</td>
<td>General computing</td>
</tr>
<tr>
<td>1950s</td>
<td>Universal Automatic Computer I (UNIVAC)</td>
<td>Computing both numerical and text commands</td>
</tr>
<tr>
<td></td>
<td>IBM 701</td>
<td>General computing</td>
</tr>
<tr>
<td></td>
<td>Whirlwind</td>
<td>First interactive / “real-time” computer</td>
</tr>
<tr>
<td></td>
<td>Formula Translation (FORTRAN)</td>
<td>First successful programming language</td>
</tr>
<tr>
<td></td>
<td>Common Business Oriented Language (COBOL)</td>
<td>Second legacy programming language</td>
</tr>
<tr>
<td>1960s</td>
<td>Computer mouse</td>
<td>First non-keyboard / punch card input device</td>
</tr>
<tr>
<td></td>
<td>Spacewar!</td>
<td>First computer game</td>
</tr>
<tr>
<td></td>
<td>Control Data Corporation 6600 (CDC 6600)</td>
<td>First supercomputer</td>
</tr>
<tr>
<td></td>
<td>Floppy disk</td>
<td>First popular external storage device</td>
</tr>
<tr>
<td>1970s</td>
<td>Unix</td>
<td>Widely used programming language</td>
</tr>
<tr>
<td></td>
<td>Intel 4004 microprocessor</td>
<td>First microprocessor; leads to the personal computer</td>
</tr>
<tr>
<td></td>
<td>C (programming language)</td>
<td>Leads to object-oriented programming languages</td>
</tr>
<tr>
<td></td>
<td>Pong</td>
<td>First commercially successful video game</td>
</tr>
<tr>
<td></td>
<td>IBM 5100 / Apple I / Commodore Pet</td>
<td>First microcomputers / personal computers</td>
</tr>
</tbody>
</table>

presented in Table 2 represents the modern period of early computer history in that it begins with the first machine that was actually produced for a governmental project vis-à-vis the tabulation of census data in the 1880s. The technology that resulted in the Hollerith Tabulator was a predecessor to the later machines that would be developed for the sole purpose of calculations. In other words, the early history of computers was linked to the need to more efficiently perform complex calculations. These were math machines, and nothing more; a simple conception of input-output. Of course, during the early 1940s, the need for technology morphed beyond calculations and into more strategic purposes in terms of the decryption of communications during World War II. This is an important moment, as it marked the move from math into the realm of what might be called “critical computer thinking.” Put differently, these decryption machines were the first generation of technologies of production that served as an extension of the human beyond calculations. Again, the early math machines were built for efficiency. Humans were capable of doing the same types of projects that the machines were designed to do; the machines only did the work more quickly. With the introduction of the decryption machines, an era began whereby humans were designing technologies to “calculate” that which was unknowable to an entire group of humans. Mixed in to this early history are a number of threads: the machines produced in the 1940s were mainly tied to the war effort, and the money to research and create those machines, in a large part, came from the government. In the 1950s, the privatization of computer production, largely led by International Business Machines (IBM), ushered in the era of innovation driven by the U.S. response to the Soviet launch of Sputnik in 1957. The subsequent emphasis on science and technology gave rise to machines that were continually more sophisticated and complex, and the creation of computer programming languages introduced what Evans (1981) called, “a new species of being, the programmer…
[who] became the indispensable link between normal mortals and the computer they served” (pp. 99-100). There is an interesting complication in this notion of a “link” between normal mortals and the immortal computer, as if to suggest that there existed a separate class of humans who were more closely connected to computers than the end-user; however, as shall be explored later in this chapter, this link also constructs a troubling power system that places control of these technologies into the hands of an elite few. Regardless, the arc of progress in this early period is built on a series of innovations that lead from government to private corporations to individual consumers by the late 1970s, an arc that culminated with the founding of Microsoft and Apple in 1975 and 1976, respectively. In a general sense, it was the creation of the personal computer and the arrival of these two companies that the early history ends and the current shift into the posthuman era begins.

Feenberg (1991) stated, “to the extent that we technologize the public sphere by transferring its functions to experts, we destroy the very meaning of democracy” (p. 9). This is a critical idea on which one should reflect when considering our current situatedness vis-à-vis the legacy of technologies of production. Throughout the 1980s, Apple and Microsoft were largely at the center of the personal computer “wars,” and though there certainly were other companies competing for supremacy in these battles, the proverbial death knell was sounded with Microsoft’s release of its Windows operating system in 1985. Prior to Windows, the operation of a computer meant that the user needed to have knowledge of programming language or, at least, a rudimentary knowledge of it. What Windows accomplished was the creation of a commercially successful Graphic User Interface, or GUI, which allowed the role of the programmer to disappear behind the curtain and enabled the user to “see” directly into the “window” of the computer; that is, it eliminated the need for the user to be proficient in programming languages.
This, in turn, meant that – for the first time – the companies who created the computer hardware finally had a user-friendly operating system that opened the global population to the possibilities of production promised by these machines. Of course, the instant implication here is that these companies were positioned for maximum profits, and a new type of control was born. In a world where a small handful of companies control access to the dominant technologies of production, there is the simultaneous creation of what can be called “hyperreal panopticism.” Again, the global proliferation of desktop computers makes the hyperreal experience possible inasmuch as those computers are the vehicles through which simulation is produced. Therefore, the companies that govern these machines also govern the panoptic mechanism as the machines control the users. Some might suggest that the notion of hyperreal panopticism would, by definition, be a misnomer, since, per Baudrillard, the hyperreal is not real at all, but rather pure simulation; however, when dealing with computers – because the process is purely driven by simulation itself – experiences on the computer are hyperreal. Ergo, the merging of these two theoretical threads is rather appropriate for the investigation at hand. In the end, hyperreal panopticism “exists” to make the meticulous reduplication of the process of production (of computers – the vehicles of simulation themselves) possible.

Which companies are central to this mechanism? As seen in Table 3 below, there are not many companies that control production of the technologies of production. There is much to learn from these leaders in the global network of technologies of production. An interesting observation: aside from IBM, whose early work was in the creation of calculation machines, and Sony, whose early work was with communications technologies, these companies were all either created or re-incorporated around the years that form the shift from the humanist era to the posthuman era. Indeed, some of the companies listed in this table were incorporated before (in
some cases, many years before) the date listed; however, the date reported in the table reflects the most recent re-incorporation of companies who had existed as a previous entity.

Table 3: Companies that govern power structures via “technologies of production”

<table>
<thead>
<tr>
<th>Company</th>
<th>Headquarters</th>
<th>Year Incorporated</th>
<th>Market Cap$</th>
<th>2011 Revenues$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe</td>
<td>San Jose, CA, USA</td>
<td>1997</td>
<td>$16.66 billion</td>
<td>$4.22 billion</td>
</tr>
<tr>
<td>Apple</td>
<td>Cupertino, CA, USA</td>
<td>1977</td>
<td>$508.31 billion</td>
<td>$127.84 billion</td>
</tr>
<tr>
<td>Dell</td>
<td>Round Rock, TX, USA</td>
<td>1987</td>
<td>$30.87 billion</td>
<td>$61.73 billion</td>
</tr>
<tr>
<td>Hewlett Packard</td>
<td>Palo Alto, CA, USA</td>
<td>1998</td>
<td>$50.16 billion</td>
<td>$127.25 billion</td>
</tr>
<tr>
<td>IBM</td>
<td>Armonk, NY, USA</td>
<td>1911</td>
<td>$230.62 billion</td>
<td>$106.92 billion</td>
</tr>
<tr>
<td>Microsoft</td>
<td>Redmond, WA, USA</td>
<td>1981</td>
<td>$269.13 billion</td>
<td>$72.05 billion</td>
</tr>
<tr>
<td>Oracle</td>
<td>Redwood City, CA, USA</td>
<td>1986</td>
<td>$150.57 billion</td>
<td>$36.71 billion</td>
</tr>
<tr>
<td>SAP</td>
<td>Walldorf, Germany</td>
<td>1972</td>
<td>$80.52 billion</td>
<td>$13.79 billion</td>
</tr>
<tr>
<td>Sony</td>
<td>Tokyo, Japan</td>
<td>1946</td>
<td>$21.45 billion</td>
<td>$6.86 trillion</td>
</tr>
</tbody>
</table>

TOTALS: $1.36 trillion $7.41 trillion

Globalization has certainly reshaped corporate structures. Of course, the early years of many of these companies (particularly in the 1980s) were not nearly as profitable as the years into the 1990s and beyond (which, not coincidentally, coincided with the rise of the World Wide Web, a thread that will be addressed later in this chapter), and the valuations listed as “Market Cap” are calculated by multiplying the current value of the company’s stock by the number of shares outstanding. Essentially, the market cap represents what the company would be worth if it was sold on a given day. However, it is important to realize that this type of technical analysis only tells part of the story of a company. It is quite difficult to “value” a company, and even more difficult still in light of the complications the global marketplace brings into the equation, as non-US companies are traded in their own currency (Yen, Euro, etc.), which is subject to the fluctuations of the daily exchange rate. Most critically, however, are the implications of these figures on the notion of hyperreal panopticism: control and discipline of the users of these machines in their daily lived experiences is big business, and the system is massive and

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16 The majority of the companies included in the tables in this chapter were listed as industry leaders from the Datamonitor series’ Industry Profiles through Ebsco’s Business Source Complete database.
17 The market cap values listed in this table were reported by Yahoo! Finance (http://finance.yahoo.com) on March 3, 2012.
18 The 2011 revenues listed in this chapter were reported by Mergent Online on March 6, 2012.
comprehensive. The totals included in this table are purely for comparison data. For instance, the gross domestic product (which is the market value of all goods and services produced in a country) of the United States in 2011 was estimated to be around $15 trillion. The nine companies represented in this table, then, recorded 2011 revenues of roughly half of the entire GDP of the United States for 2011. Perhaps more shockingly, the $7.4 trillion in revenues listed exceeded the GDP of China in 2011, which was estimated to be $7.0 trillion. In fact, the International Monetary Fund\(^\text{19}\) only listed two global constituencies with a GDP value that was more than the total revenues for these nine companies in 2011: the European Union and the United States. Every other nation in the world produced fewer goods and services in 2011 than the combined efforts of these nine companies. Not surprisingly, the majority of the companies are headquartered in the United States, but geography is a secondary consideration in a globalized economy. Also important to note is the actual production of material. For this particular thread of discussion, the consideration is on computer hardware and software; companies like Sony, Microsoft, and Apple are global leaders in the production of hardware and software, but their corporate portfolios are quite complex and certainly not limited to the production of machines. Back to Foucault’s notion of technologies of production, which allow the user to create or alter objects, these are the companies that make production possible. Feenberg (1991) claimed, “reduced to passive robots at work, the members of industrial society are unlikely to acquire the educational and characterological qualifications for active citizenship” (p. 17). Again, inasmuch as the posthuman individual spends the majority of their waking hours gazing into the screen and passively consuming that which appears in front of them, active citizenship (and, indeed, subjectivity itself) is a questionable notion. In terms of the

\(^{19}\) Data as reported by the IMF: [http://www.imf.org/](http://www.imf.org/)
site of discourse, technologies of production are at the mercy of institutions that are only focused on the growth of profit margins and whose practices are aimed at ensuring that users will constantly need to consume and upgrade their technologies. Hyperreal panopticism, in this sense, means that the posthuman individual cannot have an identity that is separate from the machine.

Technologies of sign systems

The consideration of sign systems in the posthuman era requires an understanding of the ways that individuals create and share systems of meaning and substance. It should not be surprising, then, that the governing structure of the Internet, which controls the flow of information, ideas, and communication, is the focus of this portion of the investigation. As the discursive practices of the Internet emerge, it becomes clear, especially in terms of the transmission of behavior and culture, that the promise of collaboration, though liberatory in its early constructs and assumptions, now serve to reinforce a system of global domination of which its users are (very likely) largely unaware. To start, Foucault (1966/1994) theorized

To search for the law governing signs is to discover the things that are alike… The nature of things, their coexistence, the way in which they are linked together and communicate is nothing other than their resemblance. And that resemblance is visible only in the network of signs that crosses the world from one end to the other. (p. 29)

What, then, is contained in the network of signs that crosses the world in the posthuman era? As shall be explored in this section, the Internet began as an American response to Sputnik, a project that was meant to bring together government researchers who were separated by distance to share information as efficiently as possible. For those pioneers of the Internet, the signs that were shared through the network served to help define that likeness (in terms of the mission at hand – to overcome the Soviet threat to American supremacy), to represent the linkages and derive meaning from the coexistence. In other words, signs lead to language and information. One
assumes that language and information share a common purpose, and particularly interesting in
terms of the development and proliferation of the Internet is, because of its military roots, that
common purpose was/is one of global domination. Phillipson (1992) noted, “underpinning the
discourse in which power is negotiated, constituted, and affirmed is the structure… an imperialist
world order, in which English is the dominant language” (p. 272). Obviously, then, posthumanist
technologies of sign systems, as governed by the Internet, on the one hand promise the notion of
the free flow of ideas and collaboration and, on the other, further enslave the user population to
its hegemonic constitution.

Abbate (1999) stated, “modems had been introduced in the late 1950s, but setting up a
telephone connection between two machines could be an expensive and error-prone undertaking,
and incompatibilities between computers compounded the difficulty of establishing such
communications” (p. 1). It is difficult to imagine, from a posthuman context, how disconnected
the global network was in the 1950s; after all, connectivity is largely a notion taken for granted
in the present-day. However, when considering the now-primitive communications networks of
that time and the fact that there were more radios than televisions or telephones in the United
States during that era, the picture becomes a bit clearer. As seen in Table 4 below, it was in this
context that, in response to Sputnik, the United States Department of Defense created the
Advanced Research Projects Agency, or ARPA, to prevent another Sputnik-like event from
challenging American supremacy on a global scale. Throughout the 1960s, it became apparent
that some type of communications system was necessary to bring ARPA scientists together
across the nation. More specifically, according to Abbate (1999), what was needed was a system
“to overcome the difficulties of running programs on remote computers” (p. 2). The result was
the ARPA Network, or ARPANET. First launched in 1969, the network linked ARPA scientists
stationed at four research facilities: three in California (Los Angeles, Menlo Park, and Santa Barbara), and one in Salt Lake City, Utah. Shortly after, once the system was deemed reliable,

Table 4: A brief history of the Internet

<table>
<thead>
<tr>
<th>Decade</th>
<th>Key Discursive Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950s</td>
<td>The Soviet launch of Sputnik leads to the “Space Race;” government invests in technology and communications. US Department of Defense (DOD) creates ARPA.</td>
</tr>
<tr>
<td>1960s</td>
<td>ARPA creates the ARPA Network, or “ARPANET.” The first permanent ARPANET system is launched.</td>
</tr>
<tr>
<td>1970s</td>
<td>ARPANET expands; participants begin experimenting with “net notes,” the predecessor of e-mail. The first wireless network, ALOHAnet, is developed at the University of Hawaii. ARPANET begins transitioning away from military control to the National Science Foundation (NSF).</td>
</tr>
<tr>
<td>1980s</td>
<td>Standardization of network protocols leads to the first version of the Internet. The NSF creates “NSFNET,” which marks the first networked system that provided access to a central supercomputer. The first commercial Internet Service Providers (ISPs) appear to provide access to businesses and individuals. Tim Berners-Lee begins developing technologies for the World Wide Web (WWW).</td>
</tr>
<tr>
<td>1990s</td>
<td>NSFNET decommissioned, opening Internet access to commercial entities without government oversight. The WWW is launched. Telecommunications companies begin developing and expanding high speed access capabilities. The Communications Decency Act is the first U.S. legislation specifically focused on Internet content. Wireless networks rapidly expanded. Hypertext Markup Language (HTML) is developed.</td>
</tr>
<tr>
<td>2000s</td>
<td>The term “Web 2.0” emerges. Telecommunications companies launch the first 3rd generation (3G) satellite networks for consumers.</td>
</tr>
<tr>
<td>2010s</td>
<td>The first 4th generation (4G) satellite networks are launched.</td>
</tr>
</tbody>
</table>

the network expanded to sites in the Midwest and east coast, and the evolution of the network began in haste. It did not take long, for instance, for the purpose of the system to emerge in a new direction. Initially designed to connect the various research stations, the users realized that the same structure could apply to internal sites. In other words, the research had discovered the notion of the local network, which made it possible for data to be sent between computers in the same building—an important genealogical moment in the development of the sign systems of the present-day. Another innovation was heralded in 1971, when, for the first time, ARPANET users began to send messages to one another individually (rather than simply accessing program data through the network), thus the beginning of modern day email systems. Regardless, by the late
1970s and into the early 1980s, when the microcomputer arrived on commercial markets and personal computer ownership grew, ARPANET’s usefulness came into question; particularly because, in the private sector, there was increased competition building to replicate a version of the ARPANET network for use in the commercial world. In particular, programmers worked to develop a standardized system of communications protocol that would govern the flow of information that traveled between computers via connectivity devices, which led to the adoption of Transmission Control Protocol (TCP) and Internet Protocol (IP) – simply referred to as TCP/IP – in the early 1980s. This innovation paved the way for the emergence of the privatized commercial Internet, and by the mid-1980s, ARPANET was handed over from the DOD to the NSF, which was charged with responsibility for the network. ARPANET was finally decommissioned in 1990.

Whereas the government controlled access and information to this first historical period of the network, private commercial interests led the development of the second. By 1990, then, the Internet had begun to grow. Computer manufacturers began selling machines with modems; for the business or home user, all that was needed was a mechanism through which to connect. In the early 1990s, Internet Service Providers (ISPs) met the demand for those users, providing the mechanism of connectivity through software packages that connected individual workstations to the Internet via dial-up access. In these fledgling days, ISPs included America Online and Prodigy (among others), but the content of the Internet, still in its infancy, was largely text-based, and it still required a trained programmer to get information up to the Internet itself. If the government was the guiding force behind the first period of network development, the second period was, in a major way, governed by the work of one man, Tim Berners-Lee, a British computer scientist, who was developing his theory for the World Wide Web during these years.
Berners-Lee (2000) envisioned a network that went far beyond the simple “connection” mindset that created ARPANET; instead, his vision was built on the notion of “anything being potentially connected with anything… a vision that provides us with new freedom, and allows us to grow faster than we ever could when we were fettered by the hierarchical classification systems into which we bound ourselves” (pp. 1-2). He had already, by the mid-1990s, developed Hypertext Markup Language (HTML), a programming language that made it possible to format pages that could be viewed on the Internet, but he wanted something else: a universal, global web of connectivity with the promise of collaboration and the improvement of the human condition. Berners-Lee (2000):

The fundamental principle behind the Web was that once someone somewhere made available a document, database, graphic, sound, video, or screen at some stage in an interactive dialogue, it should be accessible (subject to authorization, of course) by anyone, with any type of computer, in any country… This was a philosophical change from the approach of previous computer systems… anyone (authorized) should be able to publish and correct information, and anyone (authorized) should be able to read it. There could be no central control. To publish information, it would be put on any server, a computer that shared its resources with other computers, and the person operating it defined who could contribute, modify, and access material on it. (pp. 37-38)

This vision marked a 180-degree turn from the mission of ARPANET in its government-veiled secrecy. And, even though Berners-Lee repeatedly uses “authorized” in this passage in explaining his theory, authorization (for him) would not have been analogous to the government restrictions placed on ARPANET during the Cold War. The World Wide Web, which was Berners-Lee’s brainchild, was a decentralized network that did not require an ISP to access pages. All one needed at the local workstation was a connection and a browser. This led to the mid-1990s “battle for the browser.” By 1994, Netscape appeared on the scene, releasing its first version of a commercial browser, as recalled by Berners-Lee (2000):

On December 15 [1994]… Netscape released the commercial version of Mozilla,
renamed Navigator 1.0. It was compatible with Microsoft’s Windows operating system, the X Windows system on Unix, and Macintosh… Rather than shrink-wrap and ship it, Netscape released it over the Internet. And rather than charge for it, it was free (p. 99).

This would have been an exciting development for Berners-Lee, as Netscape’s decision to offer the browser free of charge certainly embodied the egalitarian nature of the work that he envisioned. In 1995, Compaq became the first company to release workstations that came with a web browser: Netscape Navigator. Of course, this was still an era of competition, and, certainly not to be outdone, Bill Gates and Microsoft released Windows 95 with its own browser, Internet Explorer, shortly thereafter. An interesting discursive moment should not be overlooked here: recall that, prior to these “browser wars,” individuals and businesses who wanted access to the Internet had to subscribe to ISPs, who, as the development of browser technologies increased, became more of a “middle-man” between the end-user and the World Wide Web (WWW).

Again, the WWW was different from the Internet, and ISPs were initially reluctant to provide its users access to the fledgling new web; however, it became quickly apparent that ISPs had to do exactly that. These companies, who had quickly grown to become industry titans, suddenly saw uncertain futures, as the evolution of the WWW made it less necessary for users to “need” the proprietary bells and whistles that came with the ISP packages.

There were two other discursive moments in the late 1990s that paved the way for the truly exponential growth of web culture that would come in the 2000s. First, in 1996, the U.S. government, who, up to this point, had not been involved with the development of the WWW, attempted to regulate the content of the web, mainly to restrict access to “indecent material,” through the Communications Decency Act (CDA). Though this attempt was primarily aimed at pornography, it was still perceived to be an attempt by the government to censor public material, and free speech advocates immediately began invoking First Amendment rights. Berners-Lee
(2000) recalled that those in the industry in the mid-1990s knew that government intervention was on the horizon:

The legislation everyone was terrified of surfaced as the Communications Decency Act, which rode on the big Telecommunications Act that was certain to be passed. Proposed by both the Democratic and Republican parties, it would regulate content on the Net… The Communications Decency Act passed, but then civil rights groups challenged it in the course. Ultimately, it was overthrown as unconstitutional. (pp. 112-113)

In 1997, the U.S. Supreme Court upheld lower court decisions that claimed the CDA was unconstitutional; the reversal of the Act was a clear indication that the government would not interfere with the development and operation of the WWW, opening the proverbial flood gates for innovation and growth. The second event came in 1998, when the U.S. filed suit against Microsoft and brought the company to trial for monopolization. The courts accused Microsoft of creating a monopoly in the industry by packaging its operating system software with its proprietary web browser, essentially eliminating the opportunity for competition. The trial lasted through 1999, and, though Microsoft was indeed found guilty of having constructed a monopoly and ordered to split the company (one branch for the operating system; the other for the web browser), the decision was overturned on appeal in 2000. In the eventual settlement of the case, Microsoft began allowing third-party software to be added to Windows operating systems. At the same time, Berners-Lee (2000) noted, “scarcely a month went by without the announcement of a proposed merger or acquisition between large companies that carry data over phone and cable TV lines, the second between content providers” (p. 130). In effect, the late 1990s set the stage for the evolution of the WWW, building corporate structures to essentially change the collective consciousness of Americans. Along with the year 2000 – the dawn of the 21st century – the posthuman era was finally on firm footing, the roots of which were on the U.S. west coast.

History has already dubbed the “dot-com bubble” as the period of the 1990s culminating
in 2000 with the tech-heavy NASDAQ market peak. In these years, small Internet start-up companies were all competing to build the next great idea; because the WWW was so new and provided an unknowable playing field, the possibilities seemed endless, and investors were excited about the chances of success. Lacy (2008) claimed

venture capital is one of the last vestiges of California’s Wild West. A partner in a venture firm decides to invest in a company on the basis of a lot of information… It’s not a loan, so the money is never repaid per se. Rather, the venture investor swaps stock and usually a board seat for the cash. They make their money by selling those shares when that start-up sells to a publicly traded company or goes public itself; then they pass the returns to their investors, typically large pension funds and institutional investors (pp. 79-80).

If one compares this period to the period of the late 1970s and early 1980s, when Bill Gates and Steve Jobs were respectively building their Microsoft and Apple companies, one finds that the main difference here is in the end product. Gates and Jobs had tangible machines to offer to consumers. On the web, however, what companies were selling to investors were ideas, and those investors were buying those ideas in unfathomable quantities. The most revolutionary idea that emerged from this period, and the one that marked the move from the second historical period of the network to the third, was the notion of co-constructed processes on the web, or “Web 2.0.” The premise of Web 2.0 technologies was based on the idea of real-time communication and collaboration; all that was needed to achieve this goal was the development of the platform, which took shape through social networks. There were many social networks developed in the late 1990s and early 2000s (Geocities, Friendster, ICQ, Xanga, and MySpace to name a few), and the essential point of this evolutionary moment is the notion that Lacy (2008) called the idea of “digitizing identity and what it could mean for people and the future of business online. Once you had people’s essences on your site, you could make your site into a hub of their work or social lives” (p. 151). By 2005, the Internet had only been privatized for
approximately fifteen years, but the transformation on society had been intense. The posthuman
era had begun.

This concise history provides a genealogy of the dominant sign system of the present-day
vis-à-vis the Internet. Again, Foucault considers technologies of sign systems as those which are
used to share meaning and substance. What, then, can be said of this history and the implications
for this investigation? The most critical discursive consideration is the tension between
egalitarian promise and hegemonic domination. Berners-Lee (2000) claimed:

> When I proposed the Web in 1989, the driving force I had in mind was communication
> through shared knowledge, and the driving “market” for it was collaboration among
> people at work and at home. By building a hypertext Web, a group of people of whatever
> size could easily express themselves, quickly acquire and convey knowledge, overcome
> misunderstandings, and reduce duplication of effort. This would give people in a group a
> new power to build something together (p. 162).

The WWW, then, was created with the end vision of a noble goal to bring people together to
affect positive change in the world. In this sense, the web should operate to help individuals
build a sense of agency. However, the discursive space surrounding the development of the
Internet – from the Cold War-era governmental defense mission of ARPANET to the corporate
greed of the 1990s and 2000s – complicates the notion of egalitarian promise inasmuch as it
helps to colonize the user via hegemonic domination (in terms of hardware, software, gadgets,
etc.). Borgmann (1999) claimed, “the rise of cultural information marks the beginning of a new
relation between humanity and reality” (p. 57), and the reality with which young people are
currently engaging in the present-day is directly tied to the cultural information that is
propagated by those corporations who control the “message” on the Internet. In turn, this new
reality – this hyperreality – has ushered in the era of posthuman discourse, which might be
compared to what Foucault (1966/1994) referred to as “Classical discourse,” wherein “no
interrogation as to the mode of being implied by the *cogito* could be articulated” (p. 312). In other words, Foucault suggests that, in the period of Classical discourse, cogito was impossible because the notion of “I” (“I think”) was impossible. I submit that the same is true today, only for another reason: whereas, in Classical discourse, “I” was a notion that had not yet been fully realized, today, in posthuman discourse, “I” has been supplanted by “we,” especially in terms of youth culture. To illustrate this notion, Berners-Lee (2000) suggested

> As a group works together, the members begin to reach common understandings that involve new concepts, which only they share… Boundaries of understanding have been broken, but new ones have formed around those who share the new concept. A choice has been made, and there is a gain and a loss in terms of shared understanding (p. 202).

Put differently, with the culmination of the Promethean project of controlling the flow of information through the sign systems of modernity, shared understanding becomes the only means of understanding; individual understanding becomes impossible, and subjectivities more complicated than in the past.

Borgmann (1992) lamented, “despite its beneficence, the transformative power of postmodernism is in doubt because it has failed to resolve the ambiguity of individualism” (p. 79). Indeed, as technologies of sign systems serve to annihilate individualism (and the ambiguity therein), it is clear that we have moved beyond humanism and into posthumanism—beyond individuals and towards mass culture, and, in some instances, towards mass culture as controlled by the state. This is an evolutionary moment in the history of governmentality, where states are fighting against digital colonization. As reported by the OpenNet Initiative\(^\text{20}\), there are four central types of Internet filtering, whereby governments block access to websites that contain (what a government considers to be) controversial content: (1) political, (2) social, (3) conflict, and (4) Internet. In the first case, controversial political content is considered to be anything that

\(^{20}\) [http://map.opennet.net/](http://map.opennet.net/)
“expresses views in opposition to those of the current government, or is related to human rights, freedom of expression, minority rights, and religious movements.”  

As seen in Figure 3, the countries that place the strictest filters on political content are China, Burma, Iran, Turkmenistan, Uzbekistan, and Syria, followed by Ethiopia, Yemen, and Saudi Arabia. In the second case, controversial social content is considered to be anything that is “related to sexuality, gambling, and illegal drugs and alcohol, as well as other topics that may be socially sensitive or perceived as offensive.”  

As seen in Figure 4, the countries that place the strictest filters on social content are Oman, Yemen, Saudi Arabia, and Iran, followed by China, Burma, and Indonesia. In the third case, controversial conflict content is considered to be anything that is “related to armed conflicts, border disputes, separatist movements, and militant groups.”  

As seen in Figure 5, the countries that place the strictest filters on conflict content are China and South Korea, followed by...
by Iran, Pakistan, and Burma. In the fourth case, controversial Internet content is considered to be anything that is not state controlled and that provides “e-mail, Internet hosting, search, translation, Voice over Internet Protocol (VoIP) telephone service, and circumvention methods.”

As seen in Figure 6, the countries that place the strictest filters on Internet content are Yemen, Saudi Arabia, Syria, and Iran.

Technologies of power

Technologies of power, as defined by Foucault, are those that determine the conduct of individuals, essentially objectifying the subject. Furthermore, Foucault (1976/1980a) suggested, “the individual is not a pre-given entity which is seized on by the exercise of power. The individual, with his identity and characteristics, is the product of a relation of power exercised over bodies, multiplicities, movements, desires, forces” (pp. 73-74). Recursively, as informed by the discussion of the chapter thus far, it seems most appropriate to approach an examination of technologies of power through those entities who control the product of the relations of power; specifically, in the posthuman era, the corporations who control that product are the companies who provide access and connection to the sign systems: telecommunications firms. Take, for instance, these two accounts: first, the firm LG Electronics (which, as a corporate entity, would be considered a technology of production, inasmuch as it creates mobile devices and many other types of “screen” devices) has, since 2007, sponsored the U.S. National Texting Championship – a competition with the aim of finding the “fastest thumbs in America.”

The 2011 winner, who was one of the 500,000 applicants to compete in the event, was able to text the highest number of characters in the shortest amount of time, and walked away with $50,000. Granted, though LG, who sponsors this annual event, is in itself a technology of production, the act of texting requires

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24 http://map.opennet.net/filtering-IT.html  
a technology of power (a telecom firm – AT&T, Verizon, etc.), because, without the “connection,” texting is not possible. Of course, this type of “competition,” which essentially works to objectify the individual as more machinelike, fits well into Foucault’s definition. Worse, a second example26: the electronics company Nokia has recently filed a patent for a “ferromagnetic” device that is tattooed on the body and that vibrates on the skin when the individual’s mobile device receives a new phone call, email, or other notification. Imagine, then, a classroom where it is not the sound of vibrating machines that is causing distraction, but of vibrating students. Clearly, this type of objectification leads directly to the notion of the Singularity, which will be discussed in Chapter 6. Again, the companies that control access to the flow of information are the proverbial guards in the watchtower of the hyperreal panoptic system. Without access (which is controlled by these few organizations), individuals become powerless, as stated by Borgmann (1999): “[without] information, the world closes in on you; it becomes dark and oppressive. Without information about reality, without reports and records, the reach of experience quickly trails off into the shadows of ignorance and forgetfulness” (p. 1). In a Borgmannian worst-case scenario, then, without access, without being connected to the conversations of modernity, the individual is reduced to ignorance, pushed to the shadows of the margins of society, a manifestation of power in light of Foucault’s (1977/1980b) suggestion, whereby it is “essentially that which represses. Power represses nature, the instincts, a class, individuals” (pp. 89-90). How do these companies repress society? By controlling access – essentially, by commodifying information – and, in this herculean effort to seduce the masses into buying access, these companies have assumed the role of placing value on the world’s knowledge, fulfilling Foucault’s (1966/1994) notion that value is created not by production, but

26 http://newsfeed.time.com/2012/03/21/vibrating-tattoo-could-send-text-alerts-straight-to-your-skin/
by consumption. Vaidhyanathan (2011) called this “cultural imperialism,” which “concerns the pipelines and protocols of culture, not its products.” (p. 109) In this sense, telecommunications companies, inasmuch as they control access (power) through the sign systems (the Internet, social networks, financial systems, ad infinitum), they create power as envisioned by Foucault (1977/1980b):

Power must be analyzed as something which circulates, or rather as something which only functions in the form of a chain… Power is employed and exercised through a net-like organization. And not only do individuals circulate between its threads; they are always in the position of simultaneously undergoing and exercising this power. They are not only its inert or consenting target; they are always also the elements of its articulation. In other words, individuals are the vehicles of power, not its points of application. (p. 98)

Unfortunately, however, Foucault’s last sentence needs revision in light of the current processes in place. Individuals are no longer the vehicles of power; individual companies are the vehicles of power, and, as seen in Table 5 below, there are frighteningly few companies who control global access to information.

<table>
<thead>
<tr>
<th>Company</th>
<th>Headquarters</th>
<th>Incorporated</th>
<th>Market Cap</th>
<th>2011 Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT&amp;T</td>
<td>Dallas, TX, USA</td>
<td>1983</td>
<td>$183.02 billion</td>
<td>$126.72 billion</td>
</tr>
<tr>
<td>France Telecom, S.A.</td>
<td>Paris, France</td>
<td>1990</td>
<td>$39.84 billion</td>
<td>n/a</td>
</tr>
<tr>
<td>Nippon Telegraph &amp; Telephone Co.</td>
<td>Tokyo, Japan</td>
<td>1985</td>
<td>$29.94 billion</td>
<td>$10.46 trillion</td>
</tr>
<tr>
<td>Telefonica, S.A.</td>
<td>Madrid, Spain</td>
<td>1924</td>
<td>$76.48 billion</td>
<td>n/a</td>
</tr>
<tr>
<td>Verizon</td>
<td>New York, NY, USA</td>
<td>1983</td>
<td>$109.65 billion</td>
<td>$110.88 billion</td>
</tr>
</tbody>
</table>

First, in terms of subscribers, the Japanese firm Nippon Telegraph and Telephone Company (NTT) reports a current network of 58 million wireless subscribers and 30 million telephone lines. Telefónica reports 40 million telephone lines and 19 million broadband connections. Verizon reports a combined total of 108 million subscribers, though not all of

27 For more information, see [http://www.ntt.co.jp/ir/fin_e/subscriber.html](http://www.ntt.co.jp/ir/fin_e/subscriber.html)
29 For more information, see [http://aboutus.verizonwireless.com/ataglance.html](http://aboutus.verizonwireless.com/ataglance.html)
these are individual wireless subscribers. AT&T reports\textsuperscript{30} a current network of over 100 million wireless subscribers, 43.6 million access lines, and 16.5 million broadband connections. Considering that the current population of the United States is roughly just over 310 million people, this number represents a third of the American population. Notably, “AT&T” is an acronym for “American Telephone & Telegraph” Company, the predecessor of the current iteration of the corporation, which traces its roots back to 1885 and the beginning of the communications industry in the United States. Finally, in what is the seemingly largest of them all, France Telecom reported\textsuperscript{31} that, as of December 2011, it had 167 million mobile customers and 14 million broadband connections worldwide. Notably absent in this list of behemoths is the American company Sprint, whose subscriber numbers pale in comparison. In total, these five companies control somewhere in the neighborhood of 600 million unique connections on a global scale.

What are the implications of these technologies of power in the hands of so few, and to what end are they working? Earlier in this chapter, the notion of hyperreal panopticism was proposed. Foucault (1975/1995) clarified that the Panopticon, as designed by Bentham, was meant to “be a machine for creating and sustaining a power relation independent of the person who exercises it; in short, that the inmates should be caught up in a power situation of which they are themselves the bearers” (p. 201). It should come as no surprise, then, that hyperreal panopticism is an evolutionary progression of Foucault’s theorizing, as individuals in the present-day are indeed inmates in a power situation of which they are themselves the bearers vis-à-vis the seductive lure of connectivity and paid subscriptions to these companies. What’s worse is the recognition of just how present and encompassing hyperreal panopticism is for those who

\textsuperscript{30} For more information, see http://www.att.com/gen
\textsuperscript{31} For more information, see http://www.orange.com/en_EN/group/
find themselves imprisoned by the system. Foucault (1975/1995) noted

the Panopticon was also a laboratory; it could be used as a machine to carry out experiments, to alter behavior, to train or correct individuals… The Panopticon is a privileged place for experiments on men, and for analyzing with complete certainty the transformations that may be obtained from them. (pp. 203-204)

An interesting example of current experiments taking place in the hyperreal panoptic system can be seen in the actions of AT&T, who, in 2011 announced that it would begin to enforce a process called “data throttling” for the top five percent of its wireless customers, essentially changing the definition of what the company meant by selling consumers “unlimited” data plans. The process was designed to measure the data usage of all customers, and when any single customer approached what AT&T deemed as being “too much” access, the company would remotely “throttle-back” the connectivity speed of the individual’s mobile device. The definition of “unlimited” data, then, actually implied whatever AT&T – the company who controls technologies of power – deemed the term to mean. After an outcry of protest, the company revised its definition\textsuperscript{32} of “unlimited” yet again after being sued by one customer for what essentially amounted to breach of contract with AT&T\textsuperscript{33}. As of this writing, AT&T has published what it calls a “data calculator”\textsuperscript{34} to help consumers estimate just how “unlimited” their access might be before becoming “too” unlimited.

Borgmann (1992) claimed, “computer networks not only assume the position of the central nervous system within a business but also integrate distant and relatively independent businesses into a single organism” (p. 70). Again, back to the image of the panopticon and to further illustrate the presence of hyperreal panopticism, if one examines the global network as controlled by the five leading companies, as seen in Figure 7 below, one quickly sees the reach

\textsuperscript{32} For more information, see http://bits.blogs.nytimes.com/2012/03/01/limited-unlimited-data/?scp=5&sq=at%26t+data+throttling&st=nyt

\textsuperscript{33} For more information, see http://bits.blogs.nytimes.com/2012/02/24/att-throttling-customer/?scp=1&sq=at&t%20data%20throttling&st=cse

\textsuperscript{34} For more information, see http://www.att.com/standalone/data-calculator/
that is implied.

Figure 7: Global reach of the top five telecommunications companies

This figure represents two things: first, the countries in which the companies are based (the United States, France, Spain, and Japan); and second, the countries in which those companies have subsidiary units. Of course, further complicating this arrangement of the network are the global satellites that orbit above the earth in space. For instance, none of these five companies has a physical presence in Iceland, but if an individual subscriber of one of the five companies traveled to Iceland, they would not be without access; instead, the individual would “be connected” through the Icelandic system, thus not depriving the consumer of a moment of connectivity.

Foucault (1977/1980b) suggested

This new mechanism of power… presupposes a tightly knit grid of material coercions rather than the physical existence of a sovereign. It is ultimately dependent upon the principle, which introduces a genuinely new economy of power, that one must be able simultaneously both to increase the subjected forces and to improve the force and efficacy of that which subjects them. (p. 104)

Of what might these material coercions exist? In terms of the corporate oppressions envisioned by the global network, Tapscott and Williams (2006) wrote on the implications of mass collaboration on the global marketplace and called it “wikinomics,” a notion that seems to have been embraced by corporate shareholders in each hemisphere, and that has a critical underlying
premise: “a world where value creation will be fast, fluid, and persistently disruptive. A world where only the connected will survive… a tough new business rule is emerging: Harness the new collaboration or perish” (p. 12). If one considers historical examples of the corporate oppression of the masses, this revelation should be quite disturbing, and it reinforces the tension between the egalitarian promise of collaborative communication and the forces at play vis-à-vis hegemonic domination and oppression. Corporations exist not to improve the lives of individuals, but to make more money for the shareholders. Tapscott and Williams suggest that this new period of corporate identity is filled with promise and the excitement of global collaboration. What they leave out in their hopelessly naïve thesis is the effect that their model of collaboration will have on the development of individuals and on the personal sense of agency. For businesspeople, the blind faith at the crux of this thread is built on the notion of “smart companies” who will harness the power of globalization. There is no room for dialogue regarding individuality beyond the profit margin, and yet, the damage may have already been done, as claimed by Vaidhyanathan (2011): “Unlike Bentham’s prisoners, we don’t know all the ways in which we are being watched or profiled—we simply know that we are. And we don’t regulate our behavior under the gaze of surveillance: instead, we don’t seem to care” (p. 112).

Additionally, this new world order as envisioned by corporate entities requires brainpower beyond the boardroom. Tapscott and Williams (2006) speak of corporations “making the most of university partnerships” and list the following key principles to this end:

1. use industry-university partnerships to shake up product road maps;
2. make sure collaboration is a win-win;
3. deepen and broaden collaboration across research communities;
4. keep the science open and the applications proprietary;
5. learn from “proxy” customers—early and often (pp. 176-178).

Again, the problem here is one of blind faith – there is no mention of the serious implications of
an agenda that might be thrust upon university researchers who are under the Damoclean sword of corporate stockholders’ money who expect research to produce more profit. The creation of knowledge is neither a clean nor a certain process. Failure is part of the knowledge-creation process, but it is at odds with the economic model presented in Tapscott and Williams’s argument. The government of systems of power, in the hands of the companies that control access to information, has, in this sense, brought the Internet full-circle. The initial purpose of ARPANET was meant to bring researchers together to collaborate on ways to keep another Sputnik from challenging American global supremacy. There was a glimmer of hope in Berners-Lee’s vision for the World Wide Web, a system based on egalitarian access, but within the span of a few short years, that vision was annihilated by corporate greed. Today, the Internet exists mainly as a site of entertainment for the connected population – a distraction from the panoptic gaze of those in control of reinforcing historical notions of oppression and complicating constructs of subjectivity – in which they might escape from the chains of that bondage in virtual spaces. The business model of the constant growth of profit margins assumes the creation of collaborative “team-based” organizations, which implies some type of greater good; ironically, all that those “teams” accomplish is the homogenization of society and the emphasis of groupthink. In the end, technologies of power as suggested here render the individual powerless, and the companies that control access also control individuals’ thoughts and actions.

Technologies of the self

Finally, to the notions of technologies of the self which, according to Foucault, are those that inform an individual’s thoughts and actions. In a sense, technologies of the self are derived from the discursive digressions discussed thus far in this chapter: (1) technologies of production (in the physical computer – the hardware and software, the “tool” of modernity), (2) technologies
of sign systems (in the virtual network of the Internet), and (3) technologies of power (which
grant individuals access through the physical networks provided by the telecommunications
companies). The “self” is considered here as the embodied individual at any given time during
his or her life, inasmuch as he or she is affected by contextual forces and, ultimately, informed
by those forces throughout the course of his or her life. For the purposes of this investigation,
technologies of the self are best examined by understanding the governing systems with which
the masses are interacting during their “time with the screen.” Recall from Chapter 3,
Baudrillard’s claim that there is no transcendence or depth through the simulated experience of
the screen, that there is only the smooth “function” of the hyperreal. This is a key notion for
understanding the historical rupture that comes along with the arrival of digital media. The
simulated experience of the screen is different than other technologies of the self from the past;
for instance, the novel – once an innovation in itself – was bound to the printed page, linear and
finite. Compare that to social networking, where those constraints are obliterated in favor of an
infinite possibility of options on the World Wide Web. On the one hand, especially when
considering the minds of the young, the experience of the printed page lends itself to depth as it
requires the individual to focus and process, to analyze and synthesize. On the other hand, the
smooth “function” of the hyperreal simply functions to overwhelm the mind, leading to uncritical
presentism and staccato thinking. Worse, as discussed in Chapter 3, Rideout, Foehr, and Roberts
(2010) reported that young people are generally spending between 50 and 60 hours per week
engaged with digital technologies, and the major “spaces” that are inhabited during that time
online are governed by media companies (TV), Internet companies, gaming companies, and
music companies. Especially when one considers that the average K-12 student spends
approximately 40 hours per week at school, the 50-60 hour timeframe certainly complicates
notions of “who” (or, “what”) is actually teaching these young people. An investigation into that
time, then, should help to shed light on the forces at play surrounding the discourse of
technologies of the self in the posthuman era.

In a general sense, “the media” – that is, those companies who control the information
and images that make their way to the screen itself – are the most influential forces for those who
have access to technology. The nuance of power here is different than that of the previous
discussion regarding technologies of power: with technologies of power, the question is one of
control of accessibility; with the media, vis-à-vis technologies of the self, power should be
considered in the message that is transmitted. Though this is especially true in terms of news
media, the American infatuation with “reality” television in the past decade must also be
considered in terms of the “message.” Table 6 details the top six media companies on the globe;

<table>
<thead>
<tr>
<th>Company</th>
<th>Headquarters</th>
<th>Year Incorporated</th>
<th>Market Cap</th>
<th>2011 Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBS Corporation</td>
<td>New York, NY, USA</td>
<td>1986</td>
<td>$19.66 billion</td>
<td>$14.25 billion</td>
</tr>
<tr>
<td>Comcast</td>
<td>Philadelphia, PA, USA</td>
<td>2001</td>
<td>$68.62 billion</td>
<td>$55.84 billion</td>
</tr>
<tr>
<td>News Corporation</td>
<td>New York, NY, USA</td>
<td>1979</td>
<td>$49.85 billion</td>
<td>$34.15 billion</td>
</tr>
<tr>
<td>Time Warner</td>
<td>New York, NY, USA</td>
<td>1985</td>
<td>$36.01 billion</td>
<td>$28.97 billion</td>
</tr>
<tr>
<td>Viacom</td>
<td>New York, NY, USA</td>
<td>2005</td>
<td>$29.31 billion</td>
<td>$15.04 billion</td>
</tr>
<tr>
<td>The Walt Disney Company</td>
<td>Burbank, CA, USA</td>
<td>1987</td>
<td>$77.90 billion</td>
<td>$40.96 billion</td>
</tr>
</tbody>
</table>

it is not surprising that these are all headquartered in the United States. Furthermore, these six
companies have, over the past few decades, merged with other companies and split apart from
others, all the while morphing into multinational media conglomerates. As detailed in Figures 8
through 13 below, these six media titans have a total of approximately 4,500 subsidiary
companies 35 scattered throughout the globe. Again, this merger-acquisition culture serves to
reinforce the notion of ephemerality as discussed in Chapter 3; it is no wonder that part of the
message of modernity is the notion of disposability. If something does not work, one can simply

35 As reported in company profiles by Mergent Online; accessed on March 3, 2012.
get rid of it, rebuild it from the ground up, or purchase something new. Morozov (2011) stated, that the role of media is “likely to be geared toward entertainment” (p. 66). Indeed, with the notable exception of Antarctica, these six American companies have access to media control on six of the seven continents on the globe. Four out of the six are headquartered in Manhattan, and only one of the six has its corporate offices on the west coast of the U.S. The role of media, in the hands of these small few (note here yet another illustration of hyperreal panopticism), has largely become just that: the role of court jester, whose purpose is to entertain the masses gathered around the spectacle unfolding on the screen.
What are young people “consuming” during their time with the television? Table 7 details what 18-24 year olds reported to Nielsen Media during the Fall of 2010. Not surprisingly, less than a quarter of those surveyed (18%) reported having viewed cable news channels, less than half of those who reported having been watching Comedy Central. It is no accident that Morozov redefines the role of the media as analogous to entertainers in the posthuman era. Young people, in a general sense, do not seem to want to be bothered with current events. In fact, if one considers the programming lineups of those six companies who comprise the top third of this list (MTV, Comedy Central, TBS, Vh1, ABC Family, and the Discovery Channel), with the exception of the Discovery Channel, which does include “instructional” material in its programming (and, notably, is at the bottom of this list of the top third of channels most watched), the shows command the most viewing time are nearly exclusively “entertainment.” And, in some instances, that entertainment may be affecting our very judgment. Take, for instance, as reported by The Times Picayune in April 2012, the story of a 24-year-old man who was watching professional wrestling on television with his 14-year-old cousin. Inspired by the drama unfolding on the screen, the pair took to reenacting the wrestling match at home. When the 14-year-old managed to get the 24-year-old in a “rear naked chokehold,” the 24-year-old refused to give up. By the time family members noticed the 24-year-old was turning blue and the 14-year-old let go, it was already too late, and though he was taken to a local hospital, he was pronounced dead on arrival. Regardless of the content itself (sitcoms, reality shows, perhaps a peppering of drama), overall, when young people are watching television, they are escaping the visceral angst of reality for the scripted seduction of hyperreality, they become inspired by the spectacle on the screen, and sometimes, that inspiration can lead to a lapse in judgment. Foucault

 knowledge necessitates two kinds of apprenticeship: first in words (as with all languages), then with written signs... It is in this nexus of representation, words, and space (the words representing the space of the representation, and in turn representing themselves in time) that the destiny of peoples is silently formed. (pp. 111-112)

Certainly, it is implied that, if young people are consuming programming in this way, then they are made into de facto representations of whatever the media companies are attempting to create. “Wear this type of clothing.” “Listen to this type of music.” “All of the ‘cool kids’ are doing this.” In terms of the language of modernity, phrases that appear in reality shows often enter into common parlance, essentially creating a new form of ostracism for those who are not part of the

Table 7: Television viewing habits of 18-24 year olds, Fall 2010

<table>
<thead>
<tr>
<th>Channel</th>
<th>Parent Company</th>
<th>Consumption Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTV</td>
<td>Viacom</td>
<td>44%</td>
</tr>
<tr>
<td>Comedy Central</td>
<td>Viacom</td>
<td>42%</td>
</tr>
<tr>
<td>TBS</td>
<td>Time Warner</td>
<td>35%</td>
</tr>
<tr>
<td>VH1</td>
<td>Viacom</td>
<td>34%</td>
</tr>
<tr>
<td>ABC Family</td>
<td>The Walt Disney Company</td>
<td>33%</td>
</tr>
<tr>
<td>Discovery Channel</td>
<td>Discovery Communications, Inc.</td>
<td>33%</td>
</tr>
<tr>
<td>USA Network</td>
<td>Comcast</td>
<td>32%</td>
</tr>
<tr>
<td>ESPN</td>
<td>The Walt Disney Company</td>
<td>31%</td>
</tr>
<tr>
<td>Spike TV</td>
<td>Viacom</td>
<td>31%</td>
</tr>
<tr>
<td>History Channel</td>
<td>Hearst / Disney / Comcast</td>
<td>31%</td>
</tr>
<tr>
<td>Adult Swim</td>
<td>Time Warner</td>
<td>30%</td>
</tr>
<tr>
<td>TNT</td>
<td>Time Warner</td>
<td>30%</td>
</tr>
<tr>
<td>FX</td>
<td>News Corporation</td>
<td>29%</td>
</tr>
<tr>
<td>E!</td>
<td>Comcast</td>
<td>26%</td>
</tr>
<tr>
<td>The Disney Channel</td>
<td>The Walt Disney Company</td>
<td>26%</td>
</tr>
<tr>
<td>Food Network</td>
<td>Scripps Networks Interactive</td>
<td>25%</td>
</tr>
<tr>
<td>Animal Planet</td>
<td>Discovery Communications, Inc.</td>
<td>25%</td>
</tr>
<tr>
<td>Cartoon Network</td>
<td>Time Warner</td>
<td>24%</td>
</tr>
<tr>
<td>TLC</td>
<td>Discovery Communications, Inc.</td>
<td>24%</td>
</tr>
<tr>
<td>MTV2</td>
<td>Viacom</td>
<td>23%</td>
</tr>
<tr>
<td>HBO</td>
<td>Time Warner</td>
<td>22%</td>
</tr>
<tr>
<td>Lifetime</td>
<td>Hearst / Disney / Comcast</td>
<td>21%</td>
</tr>
<tr>
<td>The Weather Channel</td>
<td>Comcast</td>
<td>21%</td>
</tr>
<tr>
<td>A&amp;E</td>
<td>Hearst / Disney / Comcast</td>
<td>21%</td>
</tr>
<tr>
<td>Nickelodeon</td>
<td>Viacom</td>
<td>21%</td>
</tr>
<tr>
<td>ESPN2</td>
<td>The Walt Disney Company</td>
<td>21%</td>
</tr>
<tr>
<td>BET</td>
<td>Viacom</td>
<td>19%</td>
</tr>
<tr>
<td>CNN</td>
<td>Time Warner</td>
<td>18%</td>
</tr>
<tr>
<td>Fox News Channel</td>
<td>News Corporation</td>
<td>18%</td>
</tr>
<tr>
<td>truTV</td>
<td>Time Warner</td>
<td>18%</td>
</tr>
<tr>
<td>National Geographic</td>
<td>News Corporation</td>
<td>17%</td>
</tr>
<tr>
<td>Syfy</td>
<td>Comcast</td>
<td>16%</td>
</tr>
<tr>
<td>ESPNews</td>
<td>The Walt Disney Company</td>
<td>16%</td>
</tr>
</tbody>
</table>

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conversation unfolding in the demographic. The producers of television shows take on a new role: those who silently form the destiny of peoples; hyperreal panopticism is apparent again.

The second dominant medium that colonizes the lives of young people is the Internet. In this sense, I do not mean to say the Internet as conceived in terms of a “technology of sign systems” as discussed earlier in the chapter; in the previous sense, the Internet was treated in terms of its structure as a network, the physicality of communication, and in that conception, the governing system of a connected, globalized world. As a discursive formation of technologies of the self, the Internet is treated here the same way that the above discussion treated television – the focus is on the content of what is consumed during one’s time online. Table 8 below reports the most visited websites of 2011. The numbers reporting the estimated daily pageviews percentage reflects the amount of traffic that was directed at the site on any given day. For instance, on any given day in 2011, Google received 40%-50% of that day’s Internet traffic. It is important to note that Google purchased Blogspot in 2003, and YouTube in 2006; therefore, those two rankings show the hegemony of corporate control in the most popular sites on the Internet. The sites “Baidu” and “QQ” are not likely familiar to most Americans, as they are the

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Global Traffic Rank</th>
<th>Estimated Percentage of Daily Global Pageviews, 2011-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google</td>
<td>1</td>
<td>40%-50%</td>
</tr>
<tr>
<td>Facebook</td>
<td>2</td>
<td>40%-44%</td>
</tr>
<tr>
<td>YouTube</td>
<td>3</td>
<td>24%-34%</td>
</tr>
<tr>
<td>Yahoo!</td>
<td>4</td>
<td>22%-26%</td>
</tr>
<tr>
<td>Baidu</td>
<td>5</td>
<td>10%-11%</td>
</tr>
<tr>
<td>Wikipedia</td>
<td>6</td>
<td>14%-15%</td>
</tr>
<tr>
<td>Windows Live</td>
<td>7</td>
<td>11%-14%</td>
</tr>
<tr>
<td>Blogspot</td>
<td>8</td>
<td>12%-14%</td>
</tr>
<tr>
<td>Twitter</td>
<td>9</td>
<td>8%-12%</td>
</tr>
<tr>
<td>QQ</td>
<td>10</td>
<td>6%-8%</td>
</tr>
<tr>
<td>Amazon</td>
<td>11</td>
<td>4%-8%</td>
</tr>
<tr>
<td>LinkedIn</td>
<td>12</td>
<td>4%-5%</td>
</tr>
</tbody>
</table>

respective equivalents of Google and Facebook in China. Also, Google and Yahoo! are both search engines; when considered together (as entities competing for global search traffic), these two sites alone comprised 60%-75% of daily Internet traffic for 2011. In considering this data, an interesting phenomenon comes to light: of the most visited websites of 2011, Amazon is the only sales-based site on the list, and its rank is at the bottom, representing only a small portion of daily traffic; however, there was a pronounced spike in Amazon traffic at the end of 2011 that coincided with the holiday shopping season. Clearly, then, the majority of Internet traffic is not necessarily spent “doing business;” instead, these numbers suggest people are (1) searching for information and (2) socializing.

Regardless of a given site’s functionality (e.g., search engine, social networking, commercial, etc.), the majority of the most visited sites on the Internet are now controlled by publicly traded companies, as evidenced in Table 9 below. As previously discussed, the World Wide Web was in its infancy in the mid-1990s, so it should be no surprise that the average age of the companies presented here is 11 years, and yet, over the short lives of these corporations, they have become titans in the industry. In 2011, these five leading companies amassed over $95 billion in total revenue. Additionally, Facebook is a notable case here because, as of this writing, the company has not yet offered stock to the public, but it will be interesting to see what happens once the company does so. There is current speculation that Facebook stock value might rival

<table>
<thead>
<tr>
<th>Company</th>
<th>Headquarters</th>
<th>Year Incorporated</th>
<th>Market Cap</th>
<th>2011 Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon</td>
<td>Seattle, WA, USA</td>
<td>1996</td>
<td>$81.59 billion</td>
<td>$48.08 billion</td>
</tr>
<tr>
<td>Baidu</td>
<td>Beijing, China</td>
<td>2000</td>
<td>$49.38 billion</td>
<td>$7.92 billion</td>
</tr>
<tr>
<td>Facebook</td>
<td>Menlo Park, CA, USA</td>
<td>2004</td>
<td>n/a</td>
<td>$3.71 billion</td>
</tr>
<tr>
<td>Google</td>
<td>Mountain View, CA, USA</td>
<td>2003</td>
<td>$201.99 billion</td>
<td>$37.91 billion</td>
</tr>
<tr>
<td>Yahoo!</td>
<td>Sunnyvale, CA, USA</td>
<td>1999</td>
<td>$18.27 billion</td>
<td>$4.98 billion</td>
</tr>
</tbody>
</table>

38 As of this writing, Baidu’s 2011 revenue figures had not been reported; this represents 2010 revenue.
that of Microsoft or Apple.

Also, the role of Google in Internet discourse bears a brief discussion. It is no surprise that Google is the most heavily accessed site on the web, as the company has positioned itself in the past few years as more than a simple search engine, but rather a neo-colonial entity with a mission of global domination. In no unclear terms, according to its website\(^{39}\), “Google’s mission is to organize the world’s information and make it universally accessible and useful.”

Vaidhyanathan (2011) called this Google’s “eschatological ideology” (p. 55). What is the fate of the future of humanity when a single entity, whose mission is a clear manifestation of hyperreal panopticism, controls the world’s information? One suggestion from Morozov (2011) speaks to the future of thought: “the environment of information abundance is not by itself conducive to democratization, as it may disrupt a number of subtle but important relationships that help to nurture critical thinking” (p. 75). Again, as shall be discussed in Chapter 5, there is a difference between information and knowledge. Google’s mission is tied to information, which, in itself, is uncritical. The development of knowledge, then, is assumed in terms of “critical thinking,” which requires the individual to engage with ambiguity—to move beyond information, to resist the passive absorption of data that occurs in the hyperreal experience. Borgmann (1999) suggested, “ambiguity is resolved through engagement with… reality, with the wilderness we are disagreed about, the urban life we are unsure of, or the people we do not understand… the resolution of ambiguity leads to clarity—the splendor of reality” (p. 185). Moving forward, it may be difficult to affect change regarding Google’s mission, but the role of undergraduate education should, at least, be informed by the implications of not only Google’s plan, but by the mission of any of the leading website corporations that serve to challenge the development of

\(^{39}\) For more information, see \url{http://www.google.com/intl/en/about/index.html}
individual agency. Hopefully, young people might be able to move beyond ambiguity, through the seduction of the screen, to the splendor of reality and knowledge that exists on the opposite side. However, there are complications and threats that come along with the fight against the seduction of the screen, especially in terms of virtual worlds. Consider the 2008 story\(^4^0\) of a British couple who were married in 2005 and were both regular denizens of the virtual world Second Life. After their (apparently) pedestrian “real life” wedding ceremony, the couple had a much more lavish virtual wedding ceremony in the in Second Life. By 2008, however, the wife had become suspicious of what her husband was doing with his time online and she hired an online private detective to follow him around. The husband’s avatar was “caught” having virtual sex with a virtual prostitute – in the wife’s mind, an act of adultery – and she filed for divorce. In terms of the blurring lines between real and hyperreal, this is an indication of some of the more complicated conversations ahead as the waters of the digital unknown become deeper.

The third dominant medium that constructs technologies of the self is gaming. Specifically, it is not the role of gaming consoles, per se, but rather the games themselves. After all, a console itself is simply the receptacle that brings the game to life and that lures the player into these virtual worlds—these alternate realities where, especially in terms of role playing games, the user (or, “gamer”) is able to create the worlds in which they exist. The top 10 global best-selling video games of 2011\(^4^1\) are outlined in Table 10 below. A few observations: first, despite only considering the top ten games sold in 2011, this list still accounts for more than a staggering 70 million units sold – indicating the cultural penetration that the gaming industry commands. Second, the most popular games are classified as “shooter” games (40% of the top


10), though it should be noted that the top two games might actually count as one (in this list, the
games are separated by console – Xbox is manufactured by Microsoft; the PlayStation 3, or
“PS3,” is manufactured by Sony). Third, Nintendo has the majority share in the 2011 gaming

<table>
<thead>
<tr>
<th>Game Title</th>
<th>Company</th>
<th>Game Type</th>
<th>Units Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call of Duty: Modern Warfare 3 (Xbox)</td>
<td>Activision</td>
<td>Shooter</td>
<td>12,534,823</td>
</tr>
<tr>
<td>Call of Duty: Modern Warfare 3 (PS3)</td>
<td>Activision</td>
<td>Shooter</td>
<td>9,964,711</td>
</tr>
<tr>
<td>Pokemon Black / White Version</td>
<td>Nintendo</td>
<td>Role-Playing</td>
<td>8,528,982</td>
</tr>
<tr>
<td>Kinect Adventures!</td>
<td>Microsoft</td>
<td>Misc</td>
<td>7,895,790</td>
</tr>
<tr>
<td>Just Dance 3</td>
<td>Ubisoft</td>
<td>Misc</td>
<td>7,149,135</td>
</tr>
<tr>
<td>Mario Kart Wii</td>
<td>Nintendo</td>
<td>Racing</td>
<td>5,366,983</td>
</tr>
<tr>
<td>Wii Sports Resort</td>
<td>Nintendo</td>
<td>Sports</td>
<td>5,311,642</td>
</tr>
<tr>
<td>Wii Sports</td>
<td>Nintendo</td>
<td>Sports</td>
<td>5,256,921</td>
</tr>
<tr>
<td>Gears of War 3 (Xbox)</td>
<td>Microsoft</td>
<td>Shooter</td>
<td>5,049,699</td>
</tr>
<tr>
<td>Battlefield 3 (Xbox)</td>
<td>Electronic Arts</td>
<td>Shooter</td>
<td>4,951,791</td>
</tr>
</tbody>
</table>

market. And, perhaps the most nuanced observation, three of the top ten selling games listed
(Kinect Adventures!, Wii Sports resort, and Wii Sports) belong to the relatively new group of
games that require full body motion to play. Essentially, in a manifestation of virtual reality, the
player is “outfitted” with sensors that the game interprets, placing the user “in the screen” where
the action is taking place in simulated space. On the one hand, one could herald the introduction
of these games as a way to elicit more movement in gamers, effectively turning game play into a
form of exercise. On the other, these games might be considered lamentable vis-à-vis the implied
surrender of the individual into yet another form hyperreality, and the results of that surrender
can lead to fatal consequences, as indicated by the 2011 story of a British man who, after an
overnight marathon of non-stop gaming died at the age of 20 from a pulmonary embolism caused
by deep vein thrombosis. This was not the first such reported death, but these stories are not
necessarily getting much media coverage. After all, why would the companies of the hyperreal
panoptic system – especially the leading gaming companies – want their consumers to know that

too much gaming can kill you?

The leading companies that control the production of these games, as outlined in Table 11 below, are not concerned with the developmental effects of their products on the consumer; indeed, the recurring theme of this chapter is that the corporate entities that control the discursive formations of technologies of the self are solely concerned with profits. Microsoft and Sony complicate the picture that this information is meant to depict. Both companies produce lucrative gaming consoles (Microsoft’s Xbox and Sony’s PlayStation) as well as the games that go along with those consoles, but they also (as explored earlier in this chapter) are leading producers of hardware, software, and other electronics. Therefore, the market cap values and revenues for Microsoft and Sony are comprehensive – they do not represent the business of the gaming sectors of the respective companies. To illustrate a more precise picture of the revenue streams of gaming companies, then, consider this: with Microsoft and Sony removed from consideration, the four other leading gaming companies that remain earned nearly $1.3 trillion in 2011 alone.

The risk that young people take in spending so much time in virtual worlds (and, based on the sales figures, they are spending lots of time there) is the risk of indifference. Borgmann (1999) suggested, “virtual reality provides no information about the world out there and is in this regard totally ambiguous. At the same time it is or aspires to be richly and engagingly informative within” (p. 186). The seduction of these virtual worlds is, in many ways, too great a force for young people to resist, so in that sense, young people themselves should not be blamed

<table>
<thead>
<tr>
<th>Company</th>
<th>Headquarters</th>
<th>Year Incorporated</th>
<th>Market Cap</th>
<th>2011 Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activision Blizzard</td>
<td>Santa Monica, CA, USA</td>
<td>1992</td>
<td>$13.29 billion</td>
<td>$4.78 billion</td>
</tr>
<tr>
<td>Electronic Arts</td>
<td>Redwood City, CA, USA</td>
<td>1991</td>
<td>$5.56 billion</td>
<td>$3.87 billion</td>
</tr>
<tr>
<td>Konami</td>
<td>Tokyo, Japan</td>
<td>1973</td>
<td>$3.87 billion</td>
<td>$265.32 billion</td>
</tr>
<tr>
<td>Microsoft</td>
<td>Redmond, WA, USA</td>
<td>1981</td>
<td>$269.13 billion</td>
<td>$72.05 billion</td>
</tr>
<tr>
<td>Nintendo</td>
<td>Kyoto, Japan</td>
<td>1947</td>
<td>$18.49 billion</td>
<td>$1.01 trillion</td>
</tr>
<tr>
<td>Sony</td>
<td>Tokyo, Japan</td>
<td>1946</td>
<td>$21.45 billion</td>
<td>$6.86 trillion</td>
</tr>
</tbody>
</table>
for giving into the effects of hyperreal panopticism; however, to understand the implication of video games as a thread of technologies of the self is to understand that these games simultaneously serve to reinforce the general lack of information about reality that young people have access to in their daily lives.

Finally, to the last dominant medium that constructs technologies of the self: music. Music has long been an adolescent escape mechanism. Historically, the 1950s, and especially the 1960s, were defined by genres of adolescent rebellion music, inasmuch as the music elicited in young people a sense of identity that distinguished them from previous generations. Indeed, music has historically been tied to identity on a global scale. There are four major corporate entities that generally control the music industry, as seen in Table 12 below. In fact, these four companies (EMI, Sony, Universal, and Warner), control nearly 90% of the entire music industry in the United States. Again, if one traces the complications of the corporate structure of these media conglomerates, an interesting image emerges: EMI’s headquarters is in London, but it is owned by Citigroup, a financial services company based in New York City, whose portfolio contains over 200 subsidiaries and a total of nearly $2 trillion in assets. Sony Music Entertainment, which is headquartered in New York City, is a subsidiary of the Sony Corporation out of Tokyo, which has been discussed throughout this chapter. Incidentally, one begins to see how, in an era of globalization, power is truly held by a small group of organizations. Universal Music Group traces its history back to the 1930s when it was started as Decca Records, but was folded into the multinational conglomerate Vivendi in 2006. Vivendi’s headquarters in Paris, France, dates back to the 1850s, and has always operated as part of the entertainment and media industries. In the recent past, Vivendi has acquired controlling interest in Activision Blizzard, one of the leading gaming companies previously discussed, and, until
2011, also owned part of NBC Universal, which is now a joint partnership between the General

Table 12: Music industry companies that govern power structures via “technologies of the self”

<table>
<thead>
<tr>
<th>Company</th>
<th>Headquarters</th>
<th>Parent Company</th>
<th>2010 Revenues</th>
<th>U.S. Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMI</td>
<td>London, UK</td>
<td>Citigroup</td>
<td>$1.06 billion</td>
<td>10%</td>
</tr>
<tr>
<td>Sony Music Entertainment</td>
<td>New York, NY, USA</td>
<td>Sony</td>
<td>$5.67 billion</td>
<td>28%</td>
</tr>
<tr>
<td>Universal Music Group</td>
<td>Santa Monica, CA, USA</td>
<td>Vivendi</td>
<td>$4.45 billion</td>
<td>31%</td>
</tr>
<tr>
<td>Warner Music Group</td>
<td>New York, NY, USA</td>
<td>Access Industries</td>
<td>$2.98 billion</td>
<td>20%</td>
</tr>
</tbody>
</table>

Electric Company and Comcast, one of the previously discussed leading media companies.

Finally, Warner Music Group was, up until 2011, a subsidiary of Time Warner, another of the leading media companies explored earlier in this chapter, when it was sold to Access Industries, a private industrial group with little other control in the music industry. When exposing these threads, the discordant interrelationships of globalized corporate structures becomes apparent, and, subsequently, the notion of hyperreal panopticism. In the end, the influence of these titans of industry permeates the majority of young peoples’ waking hours, shaping their daily lived experiences.

Regarding the consumption of music, Table 13 highlights the top 10 selling albums of 2011. The total number of albums sold in 2011, then, was 20,218,000. Clearly evident from this list is that the Universal Music Group had a good year, selling a total of 9,162,000, or 45% of the entire album sales. Sony garnered 29% of the total sales, followed by EMI and Warner (with 14% and 12% respectively). The top selling genre of the year was by far pop, which made up 57% of all record sales, followed by hip hop (22%) and country (14%). The interesting outlier here, however, is the group Mumford and Sons, whose indie/folk album, “Sigh No More” captured 7% of record sales in 2011. Again, when considering historical examples, there are


occasional moments when that which is considered “countercultural” is en vogue. It is not unusual, then, for anathemas to challenge conventional wisdom, especially in terms of young people’s consumption of music. Regardless, these occasional “blips” show no signs of

Table 13: Top selling albums of 2011

<table>
<thead>
<tr>
<th>Artist</th>
<th>Album title</th>
<th>Label / Parent Company</th>
<th>Units sold</th>
<th>Genre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adele</td>
<td>21</td>
<td>Sony Music Entertainment</td>
<td>5,824,000</td>
<td>Soul / Pop</td>
</tr>
<tr>
<td>Michael Bublé</td>
<td>Christmas</td>
<td>Warner Music Group</td>
<td>2,452,000</td>
<td>Pop / Jazz</td>
</tr>
<tr>
<td>Lady Gaga</td>
<td>Born This Way</td>
<td>Universal Music Group</td>
<td>2,101,000</td>
<td>Pop</td>
</tr>
<tr>
<td>Lil Wayne</td>
<td>Tha Carter IV</td>
<td>Universal Music Group</td>
<td>1,917,000</td>
<td>Hip Hop</td>
</tr>
<tr>
<td>Jason Aldean</td>
<td>My Kinda Party</td>
<td>EMI</td>
<td>1,576,000</td>
<td>Country</td>
</tr>
<tr>
<td>Mumford &amp; Sons</td>
<td>Sigh No More</td>
<td>Universal Music Group</td>
<td>1,420,000</td>
<td>Indie / Folk</td>
</tr>
<tr>
<td>Drake</td>
<td>Take Care</td>
<td>Universal Music Group</td>
<td>1,247,000</td>
<td>Hip Hop / R&amp;B</td>
</tr>
<tr>
<td>Justin Bieber</td>
<td>Under The Mistletoe</td>
<td>Universal Music Group</td>
<td>1,245,000</td>
<td>Pop / R&amp;B</td>
</tr>
<tr>
<td>Jay-Z/Kanye West</td>
<td>Watch The Throne</td>
<td>Universal Music Group</td>
<td>1,232,000</td>
<td>Hip Hop</td>
</tr>
<tr>
<td>Lady Antebellum</td>
<td>Own The Night</td>
<td>EMI</td>
<td>1,204,000</td>
<td>Country</td>
</tr>
</tbody>
</table>

challenging the hegemony of mainstream pop music in the lives of adolescents. As a technology of the self, it is quite arguable that music does nothing more than to further homogenize an already homogenous group.

This section began by proposing that technologies of the self, inasmuch as those technologies inform an individual’s thoughts and actions, are derived from the content with which young people are interacting during their “time with the screen” (again, between 50-60 hours per week): television, websites, video games, and music. In a generalizable sense, the data reviewed support this notion and give an indication of what young people might be “learning” during their time online, inasmuch as the “content learned” is packaged by the companies that control hyperreal panopticism. Sales figures, television viewing habits, and web traffic paint a picture that suggests young people are spending the majority of their time being entertained, searching for information, and socializing. Additionally, an examination of the discursive structures of corporate governance reveals a system of hyperreal panopticism, in which power/knowledge is controlled by a small group of multinational conglomerates of a globalized
economy. Together, the message derived from this material suggests a problematic moment for
the fate of undergraduate education in the posthuman era, one to which Means (2008) referred in
stating, “learning theorists and technology developers are concerned that traditional avenues for
setting curriculum standards and developing and disseminating curriculum materials cannot keep
up with the pace of change in today’s world” (p. 136). Indeed, how can educative systems expect
to compete with the structures of governmentality that control the lives of young people?

Granted, educative systems in and of themselves are structures of governmentality as well, but
(1) they do not have the capital investment power behind them and (2) they command a much
smaller unit of time in the daily lives of young people than technologies of the self do. Put
differently, in a critical sense, while young people are seduced by the programmed reality of
their hyperreal lives, no one seems to be paying attention to what Foucault (1966/1994) theorized
as a process of

> discontinuity – the fact that within the space of a few years a culture sometimes ceases to
think as it had been thinking up till then and begins to think other things in a new way –
[which] probably begins with an erosion from outside, from that space which is, for
thought, on the other side, but in which it has never ceased to think from the very
beginning. Ultimately, the problem that presents itself is that of the relations between
thought and culture: how is it that thought has a place in the space of the world, that it has
its origin there, and that it never ceases, in this place or that, to begin anew? (p. 50)

Clearly, the corporate forces and their need for increased profit margins are controlling the
erosion from the outside. Clearly, if left to the devices of the systems of power that are currently
in place, young people will never be able to learn how to negotiate the discontinuities that exist
within the discursive spaces of their daily lived experiences, nor will they be able to understand
or negotiate the complications of new subjectivities as informed by the technologies of
modernity. If there is any hope moving forward, it must rest in the educative process.
CHAPTER 5
A POSTHUMAN EDUCATION: THE UNDERGRADUATE EXPERIENCE OF MODERNITY

“You have to be somebody before you can share yourself.”
~ Jaron Lanier ~

The current state of higher education presents a complicated conversation. First, a brief historical glance, as seen in Table 14 below, shows that the total number of bachelor degrees awarded in the United States has increased by a total of 48% over the three decades reported, while the total number of master degrees increased by an astounding 103% and doctoral degrees by 40%. The amazing increase in the number of earned masters degrees may suggest a few different things about the American population – a sheer increase in population as the children of the Baby Boomer population came of age, an increase in earning power by a more credentialed workforce, etc. – but one thing that is not reflected in these numbers (or, at least is not implied in these numbers) is that Americans have gotten more intelligent over the past four decades. Note that, even with the 40% increase in total doctoral degrees awarded, the doctoral still only makes up 3% of the yearly degree pool; the population of Americans who earned a doctoral degree did not increase by even one percent of the college educated population over the thirty years reported in the table. What can be inferred about the work that is taking place at the undergraduate level over this time period? Table 15 below shows, over the same three decades, what can be considered one measure of achievement or intellectual growth in the life of an undergraduate.

Table 14: Bachelor’s, master’s, and doctor’s degrees conferred, 1970-2000, with comparison

<table>
<thead>
<tr>
<th>Year</th>
<th>Total bachelor’s degrees (%)</th>
<th>Total master’s degrees (%)</th>
<th>Total doctor’s degrees (%)</th>
<th>Total degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970-71</td>
<td>839,730 (76%)</td>
<td>230,509 (21%)</td>
<td>32,107 (3%)</td>
<td>1,102,346</td>
</tr>
<tr>
<td>1980-81</td>
<td>935,140 (74%)</td>
<td>295,739 (23%)</td>
<td>32,958 (3%)</td>
<td>1,263,837</td>
</tr>
<tr>
<td>1990-91</td>
<td>1,094,538 (74%)</td>
<td>337,168 (23%)</td>
<td>39,294 (3%)</td>
<td>1,471,000</td>
</tr>
<tr>
<td>2000-01</td>
<td>1,244,171 (71%)</td>
<td>468,476 (27%)</td>
<td>44,904 (3%)</td>
<td>1,757,551</td>
</tr>
</tbody>
</table>

45 Taken from the National Center for Educational Statistics, *Digest of Educational Statistics 2010*, Table 285.
student – scores on the Graduate Record Examination, or GRE. A few observations on these
numbers: first, the number of people taking the GRE increased towards the mid-1970s, only to
drop significantly (about 9%) by 1980, where it stayed relatively unchanged until a huge increase
by 1990 (up 27% from 1985). Second, verbal scores from 1970 to 2000 actually decreased by a
total of 8%, while quantitative scores increased by 12%. What might explain this discrepancy?

Table 15: Average scores on Graduate Record Examination, 1965-2005

<table>
<thead>
<tr>
<th>Academic year ending</th>
<th>Number of GRE takers</th>
<th>Average verbal score</th>
<th>Average quantitative score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>265,359</td>
<td>503</td>
<td>516</td>
</tr>
<tr>
<td>1975</td>
<td>298,335</td>
<td>493</td>
<td>508</td>
</tr>
<tr>
<td>1980</td>
<td>272,281</td>
<td>474</td>
<td>522</td>
</tr>
<tr>
<td>1985</td>
<td>271,972</td>
<td>474</td>
<td>516</td>
</tr>
<tr>
<td>1990</td>
<td>344,572</td>
<td>486</td>
<td>534</td>
</tr>
<tr>
<td>1995</td>
<td>389,539</td>
<td>477</td>
<td>544</td>
</tr>
<tr>
<td>2000</td>
<td>387,422</td>
<td>465</td>
<td>578</td>
</tr>
</tbody>
</table>

These numbers suggest that undergraduate education, over the past few decades, is privileging
quantitative instruction at the expense of the humanities, although this may not be shocking to
some. Russo (2005) suggested

the humanities have always helped frame certain choices: what kind of student are we
producing, what type of mind, what configuration of ideals, what practical skills, what
standard of conduct? In short, by whom in the future does society wish to be represented?
(p. 25).

Of course, over the past few decades, humanities education has been largely neglected, as the
GRE numbers suggest, as American society placed more emphasis on science and mathematics.
This trend continues to the present day, as noted by Spring (2012):

The National Education Technology Plan is designed to help the United States
Department of Education to implement national curriculum standards known as Common
Core Standards and what are referred to as STEM (science, technology, engineering, and
mathematics) subjects. The STEM subjects are considered important for ensuring the
United States’ ability to compete in global markets. (p. 59)

On the one hand, the American psyche has never recovered from the black eye of Sputnik, hence

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46 Taken from the National Center for Educational Statistics, *Digest of Educational Statistics 2010*, Table 344.
the perennial emphasis on empirical innovations. On the other hand, this techno-infatuation is precisely responsible for dehumanization through technology; what’s worse, if this trend continues unabated, and the next few generations of undergraduate students are taught from a statistical lens at the expense of the humanities, there is not much hope for humanism itself.

Of course, as Noddings (2003) suggested, the underlying factors that have shaped the present landscape of undergraduate education are “(1) to keep the United States strong economically and (2) to give every child an opportunity to do well financially… [however,] there is more to individual life and the life of a nation than economic superiority” (p. 84). One begins to see the need to remind everyone (university faculty, students, parents, the general American population) of the importance of the human experience in all its mystical splendor (that we are, unequivocally not machines), and of the importance of what Levy & Murnane (2007), suggested will be the two central skills required of future job markets: “Expert thinking, or solving problems for which there are no rule-based solutions… [and] Complex communication, or interacting with other humans to acquire information, explain it, or persuade them of its implications for action” (p. 167). An unfortunate dilemma is that our 20th century, industrial model of education, which is still staunchly in place today, is assessed by the ridiculous “measures” of standardized texts, and is teaching neither expert thinking nor complex communication. Gough (1995) suggested, “…an appreciation of the distinctive ways in which different kinds of fiction both constitute and interrogate the world may help us to build pedagogical bridges across the multiplicity of intra- and interpersonal ‘subjectivity gaps’ with which we are faced in curriculum work” (p. 73). Here again, young people cannot interrogate the world or explore subjectivity gaps via shallow thinking and cursory reading, but that is precisely what happens when they spend the majority of their time interacting with screens and experience
life through the “rational present.”

What’s worse, the physical structures of a typical college classroom have not changed much over the past century. There are desks or tables, chairs, a podium or lectern, a board on which the professor can write, though, granted, the overhead projector has been substituted with a ceiling-mounted digital projector, attached to a computer with Internet access, perhaps a smart board instead of a static screen. The students arrive with their laptops, mp3 players and ear pods for listening, smart phones fully equipped with access to email, the Internet, games, Facebook, text messaging, and so on. Class begins. Some students multitask and leave an ear or an eye open to the professor’s lecture, but most disappear into their gadgetry. Even in classrooms with anti-technology policies, students can be found surreptitiously “connecting” by slyly moving their hand-held devices below the desk or table. On both sides of the classroom – professor and student – the notion of embodied selves is challenged in terms of homo fractalis: embodied versus virtual selves.

Palmer (1998/2007) stated poignantly, “students are marginalized people in our society. The silence that we face in the classroom is the silence that has always been adopted by people on the margin… [who] have learned that there is safety in not speaking” (p. 45). Not surprisingly, the numbers in Table 16 below reflect that sense of marginalization. From 1996 to 2002, the total number of college undergraduates who managed to complete degrees after 5 years in their respective programs increased only two percent, which might be considered an accomplishment if it were not for the fact that that two percent increase only pushed the national graduation rate up from 50% to 52%. In addition, the gap between male graduates and female graduates did not change over this six-year period, with a relatively constant seven percent margin between the sexes. Even the female students, who are more likely than males to actually
complete undergraduate degrees, are still losing half of their counterparts along the way. Why are these numbers so bad? Rosen (2010) made one suggestion:

They are simply not happy learning the way we are teaching them. They want—and need—something different to spark their imaginations. That is our challenge as parents and educators: to create a match between students’ technological interests and skills, their sociological—often virtual—environments, and the educational system that propels their performance to higher levels and is, at the same time, engaging enough to rekindle a love of school and learning. (p. 4)

Table 16: Percent of bachelor’s students completing 4-year degree programs within 5 years

<table>
<thead>
<tr>
<th>Starting cohort</th>
<th>Total students</th>
<th>Male students</th>
<th>Female students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>50.2%</td>
<td>46.2%</td>
<td>53.6%</td>
</tr>
<tr>
<td>1997</td>
<td>51.1%</td>
<td>47.2%</td>
<td>54.4%</td>
</tr>
<tr>
<td>1998</td>
<td>51.5%</td>
<td>47.7%</td>
<td>54.6%</td>
</tr>
<tr>
<td>1999</td>
<td>52.3%</td>
<td>48.4%</td>
<td>55.5%</td>
</tr>
<tr>
<td>2000</td>
<td>52.6%</td>
<td>49.0%</td>
<td>55.6%</td>
</tr>
<tr>
<td>2001</td>
<td>52.6%</td>
<td>48.6%</td>
<td>55.8%</td>
</tr>
<tr>
<td>2002</td>
<td>52.3%</td>
<td>48.7%</td>
<td>55.2%</td>
</tr>
</tbody>
</table>

If, as Rosen implied, part of the discontent in the classroom is due to antiquated teaching methods, then clearly there is desperate work ahead in terms of reawakening the imagination. For now, imagination is being stunted in part due to three discursive threads that are muddying the water of higher education: the information-knowledge tension, the conversation on “critical thinking,” and the fatal strategy of online education. Granted, there are many other conversations and complications that help to shed light on the current status of higher education, but these three are central for the purposes of this investigation because (1) as students spend more time online, they believe that information is knowledge and oftentimes do not reflect on the source or any bias contained within the information they are consuming; (2) the process of “critical thinking,” long associated with the liberal arts and humanistic education, is being lost as colleges and universities move away from the liberal arts and humanistic modes of education and towards more rational and empirical research; and (3) as colleges and universities become more

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47 Taken from the National Center for Educational Statistics, *Digest of Educational Statistics 2010*, Table 341.
corporate-like in their operational structures, the “bottom line” is becoming more about the financial well-being of the institutions and less about the students’ educational experiences, and the rise of online education speaks directly to this corporatization of higher education.

The information-knowledge tension

American culture is infatuated with information, and indeed, American schools reflect that infatuation. Grade level equivalencies and state and national standards require students to memorize as much information as possible so they might regurgitate that information back on the state and national standardized tests – first in the 4th and 8th grades, and second, to graduate from high school. Of course, then come the college entrance tests (ACT and SAT), though thankfully, many colleges and universities have recently started to explore alternative assessments of student potential when gauging applications for admission. One would assume, then, that after more than a decade of the forced memorization of information, students who survived the banality of primary and secondary education and entered the academy would be more than adequately prepared to enter the college level classroom. Sadly, that is not always the case, as indicated by the data in Table 17 below. Ironically, think back to the previous discussion of GRE scores, where undergraduate students who were interested in seeking graduate level education were scoring higher on the quantitative questions than on the verbal questions. For those same students, as they transitioned from secondary to higher education, the opposite was true. Across

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>English</th>
<th>Mathematics</th>
<th>Reading</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public 2-year</td>
<td>6.9%</td>
<td>18.3%</td>
<td>7.1%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Public 4-year nondoctorate</td>
<td>5.3%</td>
<td>16.3%</td>
<td>5.2%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Public 4-year doctorate</td>
<td>4.4%</td>
<td>11.6%</td>
<td>3.9%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Private, non-profit, 4-year nondoctorate</td>
<td>5.2%</td>
<td>9.4%</td>
<td>3.9%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Private, non-profit, 4-year doctorate</td>
<td>2.5%</td>
<td>7.5%</td>
<td>2.9%</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

Table 17: Percent of first-year undergraduates enrolled in remedial courses, 2003-2004

48 Taken from the National Center for Educational Statistics, Digest of Educational Statistics 2010, Table 241.
the board, whether public or private, non-profit or for-profit institutions of higher education, more students are enrolling in remedial mathematics courses than any other subject. Clearly, quantitative instruction in secondary schools is not as effective as many might believe.

What, then, is implied in the nuance between information and knowledge? Moss (2012) suggested that information “is statistical and oriented around brevity and isolated facts. Knowledge is derived from thinking and reflection, after learning and wrestling with ideas” (p. 15). For the purposes of this thread of the investigation, this distinction is best, but it is not a new distinction. Again, the American infatuation with statistics and brevity is a recurring theme (the rational present) of modernity. The imperative of undergraduate education should be centered on the move from information to knowledge. As Moss claims, the creation or formation of knowledge requires thinking and reflection; to use the Ignatian tradition, knowledge requires discernment. However, the current organizational structure of schools does not allow for discernment, as class time is highly structured and intensely paced, to ensure that there is as much information presented as possible. It is as Gleick (2011) claimed: “information is what our world runs on: the blood and the fuel, the vital principle. It pervades the sciences from top to bottom, transforming every branch of knowledge” (p. 8). The blood and fuel may indeed be causing an existential crisis for American young people, as they grapple with the implications of reductionist culture that permeates their daily lives. Palmer (1998/2007) called it a “culture of disrespect, [in which] education suffers the worst possible fate—it becomes banal. When nothing is sacred, deemed worthy of respect, banality is the best we can do” (p. 114). What’s worse, the merging of Web culture with information culture has resulted in what Keen (2007) posited as a revolution, which is delivering superficial observations of the world around us rather than deep analysis, shrill opinion.
rather than considered judgment. The information business is being transformed by the Internet into the sheer noise of a hundred million bloggers all simultaneously talking about themselves... the real consequence of the Web 2.0 revolution is less culture, less reliable news, and a chaos of useless information. One chilling reality in this brave new digital epoch is the blurring, obfuscation, and even disappearance of truth. (p. 16)

Perhaps the best example of the notion of the “disappearance of truth” can be seen in the recent saga of “WikiLeaks,” the nonprofit group whose mission\(^4\) is to “bring important news and information to the public.” WikiLeaks is perhaps most infamous for publishing classified documents for public viewing, much to the chagrin of those agents of governmentality who have sought to keep the information out of the public eye. WikiLeaks seeks to provide truth in a world where truth is – as Keen suggests – disappearing. Those forces of governmentality are largely responsible for what hooks (2003) referred to as

the stench of domination... No wonder, then, that so many people feel terribly confused, uncertain, and without hope. More than anywhere else a dominator-controlled mass media, with its constant manipulation of representations in the service of the status quo, assaults us in that place where we would know hope. Despair is the greatest threat. When despair prevails we cannot create life-sustaining communities of resistance. (p. 12)

In this sense, education should provide a community of resistance against all the following: hyperreality, domination, simulated experience, radical sameness, the Singularity, ad infinitum. Any individual or group that seeks to colonize the minds of the people with information as propaganda – especially any information that seeks to reduce young people to passivity, thus complicating the development of active agency and, ultimately, humanness – is an enemy of the ideas of a liberatory education as might be constructed in a posthuman curriculum, which will be examined in Chapter 6.

Not as troubling as the disappearance of truth, perhaps, but certainly just as significant, is the disappearance of knowledge. A century ago, John Dewey (1910) grappled with the

\(^4\) [http://www.wikileaks.org/About.html](http://www.wikileaks.org/About.html)
information-knowledge tension, and posited, “information, merely as information, implies no special training of intellectual capacity; wisdom is the finest fruit of that training” (p. 52). Dewey used the term “wisdom” instead of “knowledge,” but what’s important to take from this historical reference is the notion that 100 years of progress has done nothing to ease the pressure that surrounds this particular controversy. Of course, the structured empirical models of Edward Thorndike and, later, Ralph W. Tyler, ultimately silenced Dewey’s vision for progressive education. The difference today is that we are now faced with dehumanization through gadgets, or, at least, vastly different constructs of subjectivity that did not exist in Dewey’s lifetime. The fate of knowledge (and, ultimately, of the construction of knowledge) is currently on precarious footing. Davidson and Goldberg (2010) suggested a shift in educational strategy “from learning that to learning how, from content to process” (p. 55). Here, there is an emphasis on the development of knowledge in terms of “learning how” – in the active sense of “doing” rather than “receiving” or Freire’s banking model of education. The movement towards “learning as doing” is not a new idea, but with the introduction of ubiquitous technology and, subsequently, the ubiquitous flow of information, there is a more urgent need for the transition to happen. In the past, the hallowed halls of academia were generally viewed as spaces of knowledge; in the present “information society,” the very definition of “learning institutions” takes on a different meaning. If the academy is to survive this century, it will have to change. Kamenetz (2010) claimed, “ideas travel faster over informal, digitally connected networks than when they are siloed inside academic departments” (p. 111). However, there is a threat here that will require very sensitive maneuvering in the future. When those “siloed academic departments” are thrust into the public realm, there is an infection that arrives in terms of what has been called “the cult of the amateur.”
On March 5, 2012, the nonprofit group “Invisible Children” launched a massive web campaign called “Kony 2012.” At the centerpiece of the campaign was a 30-minute video that was meant to introduce the world to the Ugandan war criminal Joseph Kony, currently a fugitive on the run and one of the most-wanted men by the International Criminal Court. The goal of the campaign is to have Kony arrested by December 2012. Upon its release, the video immediately went viral and, within the first month of the its initial post, had been viewed over 100 million times. That is over three million views per day, roughly 140,000 per hour, or over two thousand per minute. The message certainly got out to a large population. However, within a week of the campaign’s launch, the campaign itself, along with the nonprofit behind it, came under fire. First was the critique that is not all that uncommon when examining the finances of nonprofit organizations: how much of the money donated to the cause is actually going to the place intended? Second, the mystique of Kony himself raised suspicions about the timing of the campaign. Critics did not deny Kony’s history as a violent and, indeed, evil man, but there had been neither any reported sightings of him nor recent actions led by him since 2005. Why, then, the sudden campaign seven years after Kony was indicted by the International Criminal Court? Finally, there was the very bizarre story of the filmmaker behind the video, Jason Russell, who, two weeks after the campaign was launched, was arrested by the San Diego Police Department for irrational behavior in public, including running in the street wearing only his underwear and, as reported by several witnesses, masturbating in a public space. He was subsequently hospitalized and later released, but not before his wife reported that his condition was caused by the severe stress that he was experiencing as a result of the criticism of the film. Clearly, Russell was not prepared for the type of global exposure with which he engaged, and obviously,
Invisible Children’s motives in designing the campaign are not without question (after all, part of the video calls for viewers to purchase “action kits” for $30 a piece). And, even though the “success” of the campaign has not yet been determined, the underlying technological structure that made it possible is a present example of what Rosen (2010) lamented about the cult of the amateur: “if a journalist makes a mistake in gathering news, they may be fined, fired, or even jailed. If a blogger provides misinformation, absolutely nothing happens… they are not held to the same standards” (p. 161).

What are the implications of the cult of the amateur on the information-knowledge tension? Serres (1980/2007) suggested, “we are buried within ourselves; we send out signals, gestures, and sounds indefinitely and uselessly. No one listens to anyone else. Everyone speaks; no one hears; direct or reciprocal communication is blocked” (p. 121). This cacophony of voices, this barrage of uncritical information (and, ultimately, of uncritical presentism), makes up the fabric of what young people encounter every hour of every day of every year in the era of hyperreality. Even in classrooms, there is no escape. Again, even if a classroom has a policy against the use of laptops during class time, rest assured that students are thumbing at their mobile devices or smartphones beneath the tables or desks. Young people are addicted to information, partially because it speaks to the developmental processes of adolescence. Keen (2007) posited that we broadcast ourselves daily with all the shameless self-admiration of the mythical Narcissus. As traditional mainstream media is replaced by a personalized one, the Internet has become a mirror to ourselves. Rather than using it to seek news, information, or culture, we use it to actually BE the news, the information, the culture” (p. 7).

In this sense, blog culture, social networking culture – information culture – serves to satiate adolescent ego development. Furthermore, in terms of human developmental and the notion of
learning by imitation, young people, inasmuch as they are constantly connected and exposed to
the barrage of information as presented by the cult of the amateur, may be in danger of losing
their creative edge, as theorized by Serres (1980/2007): “our world is full of copiers and
repeaters, all highly rewarded with money and glory… it is better to have an opinion on a
decision that has already been made than to make one’s own” (p. 4). This same idea was
discussed by Keen (2007):

The cult of the amateur has made it increasingly difficult to determine the difference
between reader and writer, between artist and spin doctor, between art and advertisement,
between amateur and expert. The result? The decline of the quality and reliability of the
information we receive, thereby distorting, if not outrightly corrupting, our national civic
conversation. (p. 27)

The picture is becoming clearer. Undergraduate education must emphasize knowledge creation
in the face of remix culture and an unrelenting stream of uncritically authored information that –
in a general sense – people are not consuming with a critical mind. The hope for the
undergraduate transformation – that is, the hope for the creation of a community of resistance –
can best be imagined in terms of what Serres (1991/1997) suggested: “Learn everything,
certainly, but only in order to know nothing. Doubt in order to create” (p. 98). Young people
need to know that it is acceptable to doubt. Traditionally, doubt has not been part of the
undergraduate experience, especially in terms of the traditional lecture-based classroom (again,
back to Freire’s banking model of education), because it challenged the authority of the learned
professor who speaks from the privileged space at the front of the room. However, in the current
era, when there is an ever-increasing amount of amateurish information coming through the
screens of the young, doubt is an essential characteristic – an imperative for the future.

What do we know about the current landscape of undergraduate education? As seen in
Table 18 below, the current trends in undergraduate majors are overwhelmingly occupied by the
business and health professions. 57% of total majors were in what one might consider “information-driven” or scientific degree programs (business, health, computer sciences, engineering, psychology), whereas only 27% of total majors were pursuing degrees in the humanities (liberal arts, education, visual arts – though, granted, some would disagree with the placement here of education as a humanity; regardless, for the purposes of a posthuman curriculum, education, as the emphasis is on the shaping of the young, certainly falls more into this category than the information-driven sciences). Of course, there is also the 11% of undeclared majors, which speaks to a different possibility regarding the confused or overwhelmed nature of young people, some of whom may not be prepared for the pressures of “choosing” a life path at such young ages. These numbers reflect an uphill battle, as the gross majority of current undergraduate students are seeking degrees in fields that have historically paid more than others. Again, this is a critical tension, but not a new one. The myth of “the

<table>
<thead>
<tr>
<th>Field of study</th>
<th>Number of majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business, management, and marketing</td>
<td>3,389,000</td>
</tr>
<tr>
<td>Health professions and related sciences</td>
<td>3,002,000</td>
</tr>
<tr>
<td>Liberal arts, sciences, and humanities</td>
<td>1,900,000</td>
</tr>
<tr>
<td>Undeclared</td>
<td>1,683,000</td>
</tr>
<tr>
<td>Education</td>
<td>1,219,000</td>
</tr>
<tr>
<td>Visual and performing arts</td>
<td>805,000</td>
</tr>
<tr>
<td>Computer and information sciences</td>
<td>702,000</td>
</tr>
<tr>
<td>Engineering</td>
<td>690,000</td>
</tr>
<tr>
<td>Security and protective services</td>
<td>646,000</td>
</tr>
<tr>
<td>Psychology</td>
<td>606,000</td>
</tr>
</tbody>
</table>

American dream,” launched on the American people in the post-WWII boom years, is based on a trajectory of constant economic growth and the expectation that each generation will earn more money than the one before it. Indeed, this unfortunate myth has become a sort of pop-culture yardstick to measure the success of entire generations: it is as though there is something

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51 Taken from the National Center for Educational Statistics, *Digest of Educational Statistics 2010*, Table 242.
collectively inferior about a group of people in the United States if they have not achieved more spending power than their parents’ generation. It is as though the measure of what makes one’s life “meaningful” is the size of one’s bank account or the sheer size of one’s collection of gadgets. In the past, that collection of gadgets has, in some ways, defined the human experience. The irony in the present-day, of course, is that today, that collection of gadgets is reducing the human experience – dehumanizing the individual. In a general sense, there is no “reward” for being educated in America; “reward” is still tied to the suburban ideal of the 20th century nuclear family with the white picket fence and the rambunctious dog in the yard. Worse, for an industrialized country, there is a great critique of being educated in America. The masters of propaganda that control the 24-hour news cycles – talking heads that feed uncritical information into the minds of the passive agents of hyperreality – demonize the educated and creative classes as being “delusional,” “elitist,” or “stuck in the ivory tower;” anyone with a graduate degree (or, certainly a doctoral degree) does not live in “the real world” for these pop culture icons. Indeed, a posthuman curriculum seeks to empower young people to move beyond the myth, to challenge the status quo as constructed by the panoptic behemoths of the 20th century, whose information empires seek to keep America woefully uneducated at best, at worst, hopelessly ignorant and devoid of thought. The work will not be easy, but there is great reward if it is successful. Rosen (2010) claimed

> just as the pioneers in the 1800s had to brace against harsh elements and even harsher living and traveling conditions, today’s media-hungry kids must mine rocky terrain searching for the best places to dig for information, not knowing whether what they find is worthy of their efforts. (p. 150)

Today, early in the 21st century, this “pioneer generation” of young people are positioned at a precarious precipice from which there are two options: move forward with a critical mind, or fall
helplessly into the ravine of despair.

The conversation on “critical thinking”

Not all thinking is critical thinking. For instance, one could claim to like a celebrity because he or she is good looking; if one later finds out that the celebrity is morally bankrupt or murdered an entire classroom of school children, that opinion might change. How might “critical thinking” be defined? Facione (1990) defined critical thinking as

- purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based… The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit. Thus, educating good critical thinkers means working toward this ideal. It combines developing CT skills with nurturing those dispositions which consistently yield useful insights and which are the basis of a rational and democratic society. (p. 2)

In the present moment, this definition is still relevant, but there needs to be a particular emphasis on the contextual considerations of technology. To start, one must recognize and embrace the newness of the still / ever-emerging innovations that govern the present-day and the implications of those innovations vis-à-vis the analogy of the sorcerer’s apprentice, in that we are not yet sure of what our technologies may end up “doing to” the human condition. In other words, critical thinking is a process, akin to Ignatian discernment, that is tied to time and place: it requires one to pause and reflect, to engage with ambiguity, to move beyond information and towards knowledge, and to resist the passive absorption of data that generally occurs in the hyperreal experience. The central consideration of critical thinking in the posthuman era can best be phrased thus: just because we “can” does not mean that we “should.” For instance, as reported
by CNN\textsuperscript{52} in March 2010, a major controversy unfolded in the gaming community as a result of a Japanese company who released a rather unusual game. As the game begins, the player is standing on a subway platform with a teenage girl nearby. When the girl turns to the player and speaks, the game launches into attack mode, and the player gets to choose how to sexually assault not only the girl, but also her mother and her sister. The player can even invite “friends” to join in on the carnage, delivering a virtual orgy of sexual abuse and repeated rape. As if this were not enough, if a girl becomes pregnant, the player can force an abortion. The name of the game: “Rapelay.” Within weeks of its release, the public outcry was so negative that the game was removed from store shelves; of course, illegal copies of it almost instantly appeared on “underground” fileshare sites, essentially making the game still available to those who wished to play it. Conventional wisdom would suggest that such a notorious story would have made its way into public discourse, but in casual conversations with undergraduate students, many had never heard of it. In theorizing about the institutional responsibility of educational spaces in a world complicated by such controversial technologies, Bowers (2000) claimed

\begin{quote}
Our inability to discuss seriously the deeper implications of the experimental cultural trajectory that computers have put us on (a trajectory that began with the Industrial Revolution) reflects our educational institutions’ failure to provide the conceptual frameworks necessary for understanding technology as more than a tool that enables us to achieve our goals more efficiently and as the latest expression of human evolution. (p. 4)
\end{quote}

Indeed, in the case of Rapelay, students should have been given opportunities to ponder the implications of this type of technology gone awry? How on earth did this game survive as a concept? Who allowed the game to actually be packaged and sold? Where do we draw the line between acceptable and unacceptable regarding our technologies (notice that, in terms of this particular question, the issue of censorship further complicates the dialogue)? Regardless of the

\textsuperscript{52} http://articles.cnn.com/2010-03-30/world/japan.video.game.rape_1_game-teenage-girl-japanese-government?_s=PM:WORLD
major at the undergraduate level – business, biology, literature, history, physics, philosophy, pre-law, or pre-med – educational institutions do have a cultural responsibility to discuss the implications of these technological trajectories. Here, critical thinking as a process should seek to accomplish what Noddings (2005) proposed in terms of dialogue: “a common search for understanding, empathy, or appreciation. It can be playful or serious, logical or imaginative, goal or process oriented, but it is always a genuine quest for something undetermined at the beginning” (p. 23). Certainly, young people whose lives have been affected by rape would have much to say about the existence of such a game. More importantly, in an age of fleeting empathy – indeed, in an age of growing apathy – these conversations are more critical than ever.

Another construction of critical thinking can be seen in the controversial 2012 moratorium placed on scientists who were engaged with flu research. Two teams of scientists – one in the Netherlands and one in the United States – had been working with the H5N1 avian flu virus, attempting to manipulate the virus to make it more transmissible between animals, with the underlying assumption that transmission in the human population would be similar. The scientists claimed that the benefits of this research were tied to medical responses to possible flu pandemics; critics suggested that, if published (which the two teams of researchers had planned to do), the details of the virus manipulation could have provided opportunities for bioterrorist attacks around the world. In response to the crisis, the moratorium was called to allow time for conversations between the scientists, various governments, medical journal publishers, and the World Health Organization. This entire scenario is reminiscent of Nussbaum’s (2010) suggestion of “an agonizing awareness of helplessness” that is part of the human condition (p. 30). In the contexts of the classroom, students should understand that it is never possible to control

53 http://www.sciencemag.org/content/335/6067/387.full
everything all the time. If nature, on its own, had produced this easily transmissible fatal strain of flu – or worse, if nature produced an entirely different easily transmissible fatal strain of flu – there is not much that science could do to stop it on short notice. Serres (1991/1997) advocated for education that combined, “on the one hand, the hard sciences, formal, objective, powerful; on the other, what one calls culture, dying… Epistemology and pedagogy meet… in the center, in exclusion, pain, violence, and poverty; the problem of evil crosses knowledge. See the shadow” (p. 45). Here, “in the shadow” is the moratorium itself and the notion of “just because we can does not mean that we should.” To engage in critical thinking, then, young people should reflect on current events that are mired in pain, violence, and poverty. Doll (1993) spoke of curriculum as a process: “not of transmitting what is (absolutely) known but of exploring what is unknown; and through exploration students and teachers “clear the land” together, thereby transforming both the land and themselves” (p. 155). There is an urgency that comes along with critical thinking: neuroscience research is suggesting that the very processes of the brain are already being affected by the technology that young people use in their daily lives. Perhaps the “critical” in critical thinking takes on new importance.

Gleick (2011) postied, “ours is the age of virality: viral education, viral marketing, viral e-mail and video and networking. Researchers studying the Internet itself as a medium… employ not only the language but also the mathematical principles of epidemiology” (p. 316). And so it goes: what is implied here is that educational researchers – inasmuch as they are seeking ways to keep students engaged in a transformative experience – also employ the principles of epidemiology. Specifically, as viral culture infects the daily lived experiences of young people, what are the implications of technology on critical thinking? First, Small and Vorgan (2008) declared, “while the brains of today’s Digital Natives are wiring up for rapid-fire cyber searches,
the neural circuits that control the more traditional learning methods are neglected and gradually diminished” (p. 21). Naturally, then, traditional definitions of “critical thinking” are inadequate, hence the current thread of the investigation. Educators need to understand that traditional constructs of “educatedness” are no longer appropriate for a generation of young people whose brains are literally becoming “wired” differently than in the past. Harvard’s ridiculous “five foot shelf of knowledge” is not simply an anachronism; it has earned a spot alongside Paleolithic artifacts in the museum of human history.

Also, contexts play an important part in the process of critical thinking, especially for a generation of young people who are mired in uncritical presentism. For instance, consider Table 19 below. As reported by the Huffington Post, these are 20 things that became obsolete in the first decade of the 21st century. The key consideration here is that students think critically about the very nature of technological progress. Trends will come and go; what (we hope) remains constant is the human itself. A brief experiment for a group of undergraduates: find a recording of the sound that a dial-up modem made circa the late 1990s. Play it for the students in the room. For those who were born before 2000, chances are they will still remember this sound, and generally speaking, most of them will giggle nostalgically about the early days of their Internet.

Table 19: 20 things that became obsolete from 2000 through 201054

<table>
<thead>
<tr>
<th>The progress of humanity…</th>
<th>The progress of humanity…</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. VCRs and VHS tapes</td>
<td>11. Encyclopedias</td>
</tr>
<tr>
<td>2. Travel agents</td>
<td>12. CDs</td>
</tr>
<tr>
<td>3. Separation between work life and personal life</td>
<td>13. Landline phones</td>
</tr>
<tr>
<td>4. Forgetting</td>
<td>14. Film and film cameras</td>
</tr>
<tr>
<td>5. Bookstores</td>
<td>15. Yellow Pages and address books</td>
</tr>
<tr>
<td>7. Phone sex via 1-900 numbers</td>
<td>17. Fax machines</td>
</tr>
<tr>
<td>8. Maps</td>
<td>18. Wires</td>
</tr>
<tr>
<td>10. Dial-up Internet</td>
<td>20. Calling people</td>
</tr>
</tbody>
</table>

experiences. In the next few years, however, as we move into the period where college freshmen will have been born in the years of constant, high-speed access, that dial-up modem sound will become foreign – unfamiliar. Not that it needs to be, but the current generation of college students will carry with them the last human experience of the pre-Internet world. Critical thinking in the posthuman era seeks to create a site of remembrance: what do we take with us into the technological future? This question was implied in Dewey’s later work in life, as he suggested (1938/1997), “we live from birth to death in a world of persons and things which in large measure is what it is because of what has been done and transmitted from previous human activities” (p. 39). Dewey knew the importance of recursive thought on the progress of humanity and the need for younger generations to understand the genealogy of human progress. Critical thinking should merge that genealogy with the opportunity for students to understand themselves as individuals. The current system of education does not allow this to happen, as stated by Palmer (1998/2007): “of course our students are cynical about the inner outcomes of education: we teach them that the subjective self is unvalued and even unreal” (p. 19). In this sense, critical thinking is not only about the technological, but also about the fate of the individual, the individual’s relationship to technology, the individual’s relationship to the external community, and finally, the community’s relationship to technology. This way, moving into the future, we might resist the fate that Serres (1990/1995) lamented:

Now living only indoors, immersed only in passing time and not out in the weather, our contemporaries, packed into cities, use neither shovel nor oar; worse yet, they’ve never even seen them. Indifferent to the climate, except during their vacations when they rediscover the world in a clumsy, arcadian way, they naively pollute what they don’t know, which rarely hurts them and never concerns them. (p. 28)

As mentioned in Chapter 4, we live in a society where our technologies (specifically, our video games) are literally killing us. As we spend more time indoors and ignore the critical
implicatedness of our movements and technological lifestyles, we risk the obsolescence of critical thinking. At least for the time being, while we are in the early stages of the reprogramming of the brain due to overexposure to technology, there is still an opportunity to arrest the reprogramming of the brain and to nurture the longing to know. Young people, in a general sense, are indeed like sponges: they have a desperate, at times insatiable, longing to know. The hyperreal corporate model in which they live is slowly killing that longing without their even realizing that it is happening.

The fatal strategy of online education

As colleges and universities explore new ways to stay competitive for precious tuition dollars, they are becoming more desperate than ever to complete the transformation of higher education from a space of learning to a place of business. The commodification of the academy is not a new thread of discussion, but as seen in Table 20 below, there is no doubt that higher education equals big business. It should come as no surprise that this list is over-represented by Ivy League institutions; however, what does come as a surprise is the sheer scale of endowment funds represented by the schools herein. As of 2009, each school that claims one of the ten biggest endowment funds in the United States has at least a five billion dollar market value. Interestingly enough, these numbers were reported a year after the financial collapse and what is already being called the “Great Recession.” It only stands to reason that these numbers were larger in the years leading up to 2008. For these schools, then, the goal is to find ways to keep those endowment funds healthy. For schools without billion dollar endowments, the goal is to find ways to attract more students and research money with the hope of accumulating a billion dollar endowment. The process of attracting new students can take many forms aside from academics, including programming from campus offices for student affairs. It is a phenomenon
that can be seen across the country each year in terms of “preview weekends” and “student orientations” – the red carpets are rolled out, catering is ordered, balloons are inflated, etc. – in a perfectly orchestrated dance that is designed to make universities feel like safe and comfortable places for parents to leave their children. Occasionally, student affairs staff even go so far as to schedule “scavenger hunts” or other games to make the college experience appear more “fun.” Or, as reported by\(^5\) \textit{The Chronicle of Higher Education} in 2008, universities have experimented with the controversial practice of “gadget giveaways” to incoming students, whereby each newly admitted and enrolled student receives a gadget – a smartphone, a tablet, an e-reader, etc. These technologies (and, ultimately, these practices altogether) serve to create what Spring (2012) called “edutainment, the combination of entertainment with learning, [which] looks like a panacea to teachers frustrated by their efforts to engage students” (p. 75). As the commodification of education continues unabated, it seems as though these experiments in edutainment accomplish nothing more than just paving the road for the Singularity: “give the kid a gadget, and they’ll pay attention.” Sadly, the disconnect here is that no gimmick of education is a panacea. Students will continue to lose interest in classrooms in which traditional methods of teaching (e.g., the lecture / banking model) are firmly entrenched and where teachers are not

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\(^{55}\) Taken from the National Center for Educational Statistics, \textit{Digest of Educational Statistics 2010}, Table 372.

\(^{56}\) \url{http://chronicle.com/article/Response-to-a-Universitys/563/}

<table>
<thead>
<tr>
<th>Institution</th>
<th>Market value of endowment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvard University</td>
<td>$26,035,389,000</td>
</tr>
<tr>
<td>Yale University</td>
<td>$16,103,497,000</td>
</tr>
<tr>
<td>Princeton University</td>
<td>$13,386,280,000</td>
</tr>
<tr>
<td>Stanford University</td>
<td>$12,619,094,000</td>
</tr>
<tr>
<td>University of Texas System</td>
<td>$11,083,357,000</td>
</tr>
<tr>
<td>Massachusetts Institute of Technology</td>
<td>$7,982,021,000</td>
</tr>
<tr>
<td>University of Michigan, Ann Arbor</td>
<td>$5,914,285,000</td>
</tr>
<tr>
<td>Columbia University in the City of New York</td>
<td>$5,892,798,000</td>
</tr>
<tr>
<td>University of Pennsylvania</td>
<td>$5,170,539,000</td>
</tr>
<tr>
<td>University of California System</td>
<td>$4,977,483,000</td>
</tr>
</tbody>
</table>
engaging them in the critical discourse of modernity. One of the grossest indications of the academy’s surrender to the present-day gimmick culture can be seen in online education, a fatal strategy inasmuch as it ultimately eliminates the possibility of the development of individual agency and reduces the student to a passive object.

Essentially, online degree programs remove the need for the physical classroom space and, therefore, embody the criteria of Baudrillard’s third order simulation. The nature of online courses, which emphasizes independent learning and the notion of a “do-it-yourself-university,” centers on the “canned course” approach in which curriculum is delivered via strategically designed instructional units, tied to learning objectives and course goals, and where students are “facilitators” of their own learning processes. This approach is not new; it is an evolution of the decades-old “correspondence course” model, reconceptualized in terms of our digital present.

What’s more, as indicated by Table 21 below, there are significant portions of the undergraduate population who are enrolling in these courses. Indeed, one must pause to wonder about the value of online degree programs and the recent proliferation of for-profit colleges and universities who are stewards of this commodified version of education – who market “learning anytime, anywhere” – in effect, creating hypermarkets of education with reckless abandon at the expense of the human experience. In this system (the hypermarket), virtual professors “deliver” programmatic instructional units where the “students” become floating signifiers. The virtual

<table>
<thead>
<tr>
<th>Institution type</th>
<th>Percentage of students taking distance education courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-year public</td>
<td>24%</td>
</tr>
<tr>
<td>4-year public</td>
<td>18%</td>
</tr>
<tr>
<td>2-year private, non-profit</td>
<td>20%</td>
</tr>
<tr>
<td>4-year private, non-profit</td>
<td>14%</td>
</tr>
<tr>
<td>2-year private, for-profit</td>
<td>18%</td>
</tr>
<tr>
<td>4-year private, for-profit</td>
<td>30%</td>
</tr>
</tbody>
</table>

57 Taken from the National Center for Educational Statistics, *The Condition of Education 2011*, Figure 43-1.
school perpetuates an illusion (for students) wherein the (perceived) absence of power reflects
freedom; however, in this “free” classroom space, students are subjected to idealized simulations
of learning – required to reproduce “knowledge” in virtual fora (blogs, wikis, discussion boards)
– a form of intellectual slavery. The online format does not engage students in critical thinking;
instead, it renders critical thinking impossible inasmuch as it does not allow for embodied human
discourse and contributes to the dehumanization of the population. Baudrillard (2000b) called
this phenomenon “the Perfect Crime:”

By shifting to a virtual world, we go beyond alienation, into a state of radical deprivation
of the Other, or indeed of any otherness, alterity, or negativity. We move into a world
where… nothing will survive as an idea or a concept. You will not even have time
enough to imagine. Events, real events, will not even have enough time to take place…
This pure, absolute reality, this unconditional realization of the world – this is what I call
the Perfect Crime. (pp. 66-67)

The irony herein is significant: the peddlers of virtual education claim to serve a population of
students who are often Others themselves – working adults, parents, non-traditional students who
otherwise would not have access to a degree program. However, in buying this simulated version
of education, bereft of the synergy and existential complicatedness of the “real” classroom (and,
ence, engagement with the process of critical thought), these students are receiving degrees that
marginalize them yet again in terms of the growing suspicions and biases (even stigmas)
regarding the rigor and value of degrees from these virtual universities, thereby creating new
hierarchies, as proposed by Spring (2012): “The current pattern suggests more online instruction
for middle and low income families and more face-to-face education for higher income families”
p. 142). Only if the academy is able to de-emphasizing the role of these “instructional methods”
will students be challenged to resist digital colonization.

Baudrillard (1994) problematized the hypermarket as a “hyperspace of the commodity
where in many regards a whole new sociality is elaborated.” (p. 75) In the case of the online degree industry, the new sociality is governed by the “production” of knowledge in these hyperspaces – the ultimate hypercommodity: one’s education. The problems here, however, are legion. Allen and Seaman (2010) reported

Over 5.6 millions students were taking at least one online course during the fall 2009 term; an increase of nearly one million students over the number reported the previous year. The twenty-one percent growth rate for online enrollments far exceeds the less than two percent growth of the overall higher education student population. Nearly thirty percent of higher education students now take at least one course online. (p. 2)

And why not? Online education is the ultimate in hyperreal seduction: stay in the comfort of your own home and earn a degree. The degree – as hypercommodity – promises the allure of upward mobility and the promise of bourgeois living. In a consumer society, what could be more exciting? The marketing of these programs offers a disappointing glimpse into this sad state of affairs: “Get an education from home!” “Get the education you deserve!” “Finish your education in as little as 18 months!” It is enough to melt the heart: the idea that “education” is reduced to the level of article (AN education / THE education) is only worsened by the notion that one can “finish” one’s education – and that one can do so in as little as 18 months. In this sense, an online degree program – as it reduces the educative experience to nothing more than a do-it-yourself commodity – is little more than an exercise in banality – a fatal strategy – a trope of authenticity, but a trope with a massive student population nonetheless, as indicated by Table 22 below.

Listed here are the largest universities in the United States by enrollment. On the one hand, there are the “usual suspects” of the bricks and mortar campus behemoths (Arizona State, Ohio State, U.T. Austin). On the other hand, the surprise is the shocking number of enrolled students at the virtual University of Phoenix, which has a student population larger than Arizona State, Miami Dade College, Ohio State, Houston Community College, the University of Central Florida, and
the University of Minnesota, Twin Cities combined.

Table 22: 10 largest degree-granting colleges and universities, Fall 2009

<table>
<thead>
<tr>
<th>Institution</th>
<th>Total Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Phoenix</td>
<td>380,232</td>
</tr>
<tr>
<td>Kaplan University</td>
<td>71,011</td>
</tr>
<tr>
<td>Arizona State University</td>
<td>68,064</td>
</tr>
<tr>
<td>Miami Dade College</td>
<td>59,120</td>
</tr>
<tr>
<td>Ohio State University</td>
<td>55,014</td>
</tr>
<tr>
<td>Houston Community College</td>
<td>54,942</td>
</tr>
<tr>
<td>Strayer University</td>
<td>54,325</td>
</tr>
<tr>
<td>University of Central Florida</td>
<td>53,401</td>
</tr>
<tr>
<td>University of Minnesota, Twin Cities</td>
<td>51,659</td>
</tr>
<tr>
<td>University of Texas at Austin</td>
<td>50,995</td>
</tr>
</tbody>
</table>

The viral growth of online education might be considered as a fatal blow to education, and one might frame the critique of online education around the replication of the classroom experience in simulated space and the claim that online education embodies the ideology of lived experience (inasmuch as online degree programs promise a comparable experience to traditional degree programs). However, one quickly recognizes the inherent limitations of cyber-degrees, beginning with the fate of the individual as theorized by Baudrillard (2001):

> The Internet thinks me. The Virtual thinks me. My double is wandering through the networks, where I shall never meet him. For that parallel universe has no relation to this one. It is an artificial transcription of it, a total echoing of it, but it does not reflect it… Non-referential – orbital and exorbital – it is never again intended to meet up with the real world. Having absorbed the original, it produces the world as undecidable. (p. 15)

In other words, as a student enrolls in an online degree program, he himself becomes irrelevant, as it is not he who is participating in the program, but his double – his virtual self. This leads not only to an alienation of the people involved in the “classroom” experience, but also to the annihilation of creativity and synergy that exists in the embodied classroom. Effectively, as Baudrillard (2001) claimed, “The whole problem is one of abandoning critical thought.” (p. 17) Sadly, it gets worse. As online degree programs flatten the educative experience into pre-

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58 Taken from the National Center for Educational Statistics, *Digest of Educational Statistics 2010*, Table 246.
programed units of instruction, delineated by checklists of tasks and assignments, what results is
– as previously stated – the promise of information rather than knowledge; put differently, online
degree programs lead to an insipid form of artificial intelligence through the mere digitization of curricula. Although, according to Baudrillard (2007a), if we embrace this fate as a condition of modernity, perhaps it does not matter in the end:

What the tyranny of Artificial Intelligence leads to most surely is the birth of a previously unknown stupidity – artificial stupidity – deployed everywhere on the screens and in the computer networks… When intelligence becomes hegemonic, becoming a mode of technical, collective, automatic adaptation, then any other hypothesis than intelligence becomes preferable. Stupidity becomes preferable. (pp. 178-179)

Because online degree programs are built on the absence of live interaction, intelligence becomes hegemonic in the sense of rote memorization and the limitation of knowledge to the lowest level of fact through information. In addition, the purveyors of these degree programs – who are responsible for the pedagogical phantasms on the screen – themselves become automatons whose purpose is to “facilitate” (not to teach) their virtual students. This is another key distinction. The etymology of pedagogy suggests a “leading out” when working with students; of course, when students are absorbed by code and trapped in the screen, pedagogy becomes impossible, hence the reference to “pedagogical phantasms.” Instead, true to the notion of the hypermarket and the degree as commodity, online degree programs match up several sections of students with single facilitators – as many as 100 or more students per individual facilitator in a single term (granted, this is hardly comparable to the truly criminal practice at large universities of course sections of 500 or more in auditoriums, another venue for the emergence of artificial stupidity) – that frequently result in hyperinflated grades (after all, when the commodity is what’s central, one does not want to risk losing a customer over a poor grade). In the rush to keep up with each student’s tasks during the weekly units, rigor is effectively lost to simulation. Make no mistake:
online programs render the art of pedagogy irrelevant by design. Baudrillard (2000a) asked us to consider merely our continual wishing for ‘everything to work by itself’, for every object to perform this miracle of minimum effort in the carrying out of its assigned function. For the user, automatism means a wondrous absence of activity… an esoteric satisfaction experienced at the most everyday level. (p. 111)

Conceivably, this investigation might assume too much about the state of humanity; it is possible that people do, in fact, seek the miracle of minimum effort in their daily lived experiences, and that online degree programs present us with an inevitable evolutionary moment along the path to dehumanization. Regardless, the structures and processes that govern the development and propagation of online degree programs are troublesome, if for no other reason than the fate of the student is ignored in favor of the product sold. This may be considered romantically idealistic, but for those who embrace the challenge posed by resistance – in which the pedagogue values paedeia over revenue – the affront of this industry does not go unnoticed. In the sense of simulation, the online degree presents only the appearance of an educational system – what value is there? Who is being taught? For what purpose? Baudrillard (2001): “Illusion is the fundamental rule.” (p. 6) Online degree programs, inasmuch as they engage all involved in fundamental illusion (delusion), ultimately limit the possibilities of education.

Sadly, it does not seem as though the growth of online education will abate in the near future, which is why resistance will be critical moving forward. Already, there are many who work towards making online education a central part of every university’s business plan, though, as stated by Kamenetz (2010),

There is snobbery at work: the vanguard of online programs are at colleges that offer only associate’s degrees, at the bottom of the Carnegie hierarchy. Perhaps as a result, at traditional universities, digital offerings may be treated as an afterthought, a poor relation of what goes on in the classroom. The emphasis [regarding distance learning] is on “distance,” as in, This is a long way from real learning. (p. 95)
Indeed, as it should be. This indicates that, at least for the time being, traditional universities still have the opportunity to resist this type of commodification of the educational experience – this hyperreal phantasm of education – in favor of educational realism, if for no other reason than to challenge efforts at dehumanization and the creation of a population of passive agents. Spring (2012) stated, “students who receive all their instruction online… may be indirectly educated not to care about others. Their face-to-face social skills will decline along with their concern about others” (p. 113).

The looming storm

The data presented in this chapter suggest there may be a proverbial storm on the horizon of higher education, and at the center of that storm are the information-knowledge tension, critical thinking, and online education, which all contribute threads to this particular discourse. As the cost of higher education continues to rise, there will likely be more acute attention placed on the value of the degree itself; in other words, the consumers of higher education will likely be more critical of what is happening inside the classroom and whether those educative processes are preparing students for the demands of the globalized, digitized, 21st century world. The present trends of the corporatization of the academy and the commodification of the educational experience are, in turn, causing a shift in the classroom experience, away from knowledge and critical thinking, perhaps even aggravating the notion of uncritical presentism. Higher education should be the last line of defense to combat uncritical presentism and to teach critical thinking skills; however, as educators ignore the contextual lives of their students, siloed in their own departments and research projects, unwilling (or unable) to adjust to the changing demands of the students themselves, the students are being reduced down to mere numbers – an assembly line of dehumanization akin to the hyperreal experience. As faculty are bound by the pressures of
publishing, research agendas, and grant seeking, their attention is taken away from the lives of
the very students who are under their care. Teaching, in the current system, seems to be a mere
afterthought – a secondary concern. This academic apathy and indifference to the students cannot
go on indefinitely. If there is an opportunity for an emerging space to help combat these trends, it
might be found in a posthuman curriculum.
To a Pupil

Is reform needed? Is it through you?
The greater the reform needed, the greater the personality you need to accomplish it.

You! do you not see how it would serve to have eyes, blood, complexion, clean and sweet?
Do you not see how it would serve to have such a Body and Soul, that when you enter the crowd,
an atmosphere of desire and command enters with you, and every one is impress’d with your personality?

O the magnet! the flesh over and over!
Go, dear friend! if need be, give up all else, and commence to-day
to inure yourself to pluck, reality, self-esteem, definiteness, elevatedness;
Rest not, till you rivet and publish yourself of your own personality.

Walt Whitman
Leaves of Grass

In his work *De Anima*, Aristotle explored the nature of “the soul,” and claimed that the
soul exists inasmuch as it encompasses all of human experience: knowledge, perception,
sensation, and imagination. Essentially, the soul (for Aristotle) is defined as the human
experience – not in the sense of religious constructs, but the comprehensive essence of the
human – physical movement, the process of thinking, communicating with others, or breathing.
If the question is, “what does it mean to be human?” then one possible answer is “the realization
of the soul.” One’s energy (in an esoteric sense) exists, but is not necessarily recognized or
developed to its fullest potential. In an era when people spend more of their waking hours
interacting with screens than with flesh and blood, the process of the realization of the soul
becomes paramount; otherwise, the soul is reduced to the shadows of the margins of our lives.
The screen takes over and, in the end, defines who we are, what we do, and ultimately, what we
will become, hence the complications of subjectivity in the posthuman era. Turkle (1984/2005)
compared this phenomenon to the Greek myth of Narcissus: “people who work with computers
can easily fall in love with the worlds they have constructed or with their performances in the worlds created for them by others” (p. 81). What Turkle did not suggest is that people who fall in love with their virtual worlds can, indeed, die as a result of that infatuation, both literally (as suggested in Chapter 4) and, for the purposes of this chapter, metaphorically. I submit that the unfortunate burden that has been placed upon the current generation of young people (and, by “young people,” I mean to say the age of the traditional undergraduate student, roughly 18 to 24 years old) is that they have not been afforded the opportunity to engage with their own visceral humanness, their vital strangeness, and their fledgling individualities. Colonized by their own reflections in the screens of their gadgets nearly from birth, and victims of runaway consumerism, young people are experiencing metaphorical death with each passing year, as they give up more of themselves to the digital experience and become more distanced from their human essences, their life forces, and, criminally, their souls.

This investigation began by proposing the following questions: (1) How is technology reshaping what it means to be human? (2) How might an understanding of the shift from the human era to the posthuman era inform subjectivity? (3) What is the purpose of undergraduate education in a posthuman era? In framing the theoretical underpinning of this narrative, a trifecta of methodologies was employed: philosophical inquiry, poststructural inquiry, and historical inquiry. Here, as the end of this investigation nears, what might the reflective gaze suggest about shaping answers to the questions? In Chapter 2, the “human” was explored in terms of the work of Ignatius Loyola during a comparable paradigm shift between the medieval and Renaissance traditions. In Chapter 3, the “posthuman” was examined in terms of the theorizing of Jean Baudrillard, where the construct of the hyperreal creates a problematized tension between the human and the machine. Chapter 4 presented a poststructural examination of the changes
currently taking place in the developing lives of young people and the present-day negotiations of subjectivity through Foucault’s four types of technologies (production, sign systems, power, and the self). In Chapter 5, the current landscape of undergraduate education was explored. At this point, as seen in Table 23 below, when theorizing at the crossroads of time, there are unique opportunities and commonalities in the past through which a posthuman curriculum might be envisioned. Before addressing the questions, recall from Chapter 2, that at the shift into the

<table>
<thead>
<tr>
<th>Subjectivity</th>
<th>Humanism</th>
<th>Posthumanism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negotiated between God and man</td>
<td>Negotiated between man and machine</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The study of history</th>
<th>Humanism</th>
<th>Posthumanism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Central to understanding one’s present and informing one’s future</td>
<td>Considered obsolete and unnecessary in light of the rational present</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agency</th>
<th>Humanism</th>
<th>Posthumanism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active; focus is centered on production</td>
<td>Passive; focus is centered on consumption</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Critical thinking</th>
<th>Humanism</th>
<th>Posthumanism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Discernment: the individual searches for meaning in the knowable (and unknowable) universe</td>
<td>The Singularity: the individual is programmed for meaning in the knowable universe; there is no unknowable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technology</th>
<th>Humanism</th>
<th>Posthumanism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tools of daily life: building materials, hunting materials; technology as extension of man</td>
<td>Tools of daily life: smart phones, tablets, wireless connectivity; technology as man himself</td>
</tr>
</tbody>
</table>

humanist era, subjectivity was negotiated between God and man. For Ignatius, the journey towards self-discovery was facilitated through the process of discernment, and, in part, the role of history was emphasized in the Jesuit system of education inasmuch as history was central to understanding one’s present and informing one’s place in the knowable universe (along the journey towards active agency); the unknowable universe—that is, the kingdom of God—was understood as a mystical experience of the finite nature of man and the infinite nature of God. In the posthuman era, these questions are more complicated and the answers, more nuanced and (potentially) frightening. Granted, technology is not the only force causing tension in the current shift towards posthumanism; certainly, neoliberalism and hypercapitalism are also key discursive
threads that highlight the problems of modernity. What’s more, despite what may be considered as the current terminal phase of rampant capitalism and commodification that comes along with perpetual futurism and upgrade culture, these two ideas (neoliberalism and hypercapitalism) are not sufficient lenses through which to examine the central threat to humanity – technology itself is. I say this because technology is moving into what may, in fact, be a terminal phase, inasmuch as it is leading away from its extensionist roots and towards an embodied merging with the human. Neither neoliberalism nor hypercapitalism are able to achieve this sort of embodiment. Naturally, then, the role of technology moving forward will have to be closely watched in terms of the human relationship to the digital experience.

Technology and the posthuman

In a general sense, the role of technology has evolved from the humanist period, when technology was considered as a tool of production (the wheel, the hammer, moveable type, etc.) to the present, posthuman era, where “technology” is no longer simply “a tool” – technology is currently an extension of the individual self, although it is theorized that in the not-to-distant future, technology will become more implicit within the human him or herself. As implied by a recurring theme of this investigation, individuals have become tangled in their tethers; that is, they have become colonized by their screens – reduced to passivity in terms of their daily lived experiences. And, as machines become “smarter” and humans become more objectified, the world, mired in a landscape of uncritical presentism and a glut of information, becomes like a sea of quicksand through which individual has to travel. The complications presented by machines that are “smarter” than individuals will create a new sense of the unknowable moving forward; in fact, in order to be “human,” people will have to become more machinelike. At least, that is the horizon that technology theorists and futurists have painted in terms of the merging of the human
and machine, a horizon that has been labeled the “Singularity” – and it is not as distant as one might suspect. Kurzweil (2005) defines the Singularity as

a future period during which the pace of technological change will be so rapid, its impact so deep, that human life will be irreversibly transformed. Although neither utopian nor dystopian, this epoch will transform the concepts that we rely on to give meaning to our lives, from our business models to the cycle of human life, including death itself. (p. 7)

As seen in Figure 14 below, which shows the flow of converging subjectivities, the Singularity is in its formative stages as of this writing in the spring of 2012.

![Figure 14: The chart of converging subjectivities](image)

What does Kurzweil’s theorizing predict? He starts by suggesting that the Singularity will be the result of Moore’s law, a theory first developed by computer scientist (and, incidentally, one of the founders of the Intel corporation) Gordon Moore, in 1965. Essentially, Moore’s law suggests that capacity of the integrated circuit – that is, think in terms of the amount of computer

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59 For this section of the investigation, which focuses solely on the notion of the Singularity as it introduces a new subjectivity, all references come from Ray Kurzweil’s 2005 book *The Singularity is near.*
memory on your machine – doubles roughly every 18 to 24 months. This has, in fact, been the case for the past few decades and shows no sign of slowing down or stopping in the near future. Kurzweil rightly points out that this “human-created” technological innovation leads to exponential growth of computing power, which “starts out almost imperceptibly and then explodes with unexpected fury—unexpected, that is, if one does not take care to follow its trajectory” (p. 8). However, therein lies the problem: the “explosion” will very likely be unexpected, as the average person does not make it part of his or her daily practice to keep track of the technological progress of computing power. In general, people (especially young people) simply want their gadgets to work; they do not spend time pondering what makes them work. This is troubling, especially because this “unexpected” future moment could present itself as a “how-did-we-get-here?” moment. In this sense, once Pandora’s box is opened, there is no turning back.

What is the timeline that Kurzweil places on the Singularity? As seen in Table 24 below60, there is a sense of urgency implied in this conversation: “Before the middle of this century, the growth rates of our technology… will be so steep as to appear essentially vertical… so extreme that the changes they bring about will appear to rupture the fabric of human history” (p. 9). In other words, the Singularity (according to Kurzweil) will “arrive” before 2050. For Kurzweil and people like him who see the Singularity as a positive evolutionary development, there is a sense of excitement that comes along with the notion of there being no distinction between human and machine. In thinking of the technological progress that would be required to make this timeframe a reality, Kurzweil may be correct, as there is nothing in place currently to scale back the pace of innovation; what’s worse, Kurzweil notes, “Already the Defense

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60 All references from Kurzweil (2005).
Table 24: Timeline of the Singularity

<table>
<thead>
<tr>
<th>Decade</th>
<th>Key Discursive Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010s</td>
<td>The “genetic revolution” is underway, which seeks to “reprogram our biology to achieve the virtual elimination of disease, dramatic expansion of human potential, and radical life extension” (p. 205)</td>
</tr>
<tr>
<td></td>
<td>“Learning” – that is, the educative process – begins to become obsolete as information makes its way online and people begin moving away from college campuses and onto the screen.</td>
</tr>
<tr>
<td></td>
<td>A supercomputer will be created that can emulate an individual human’s intelligence</td>
</tr>
<tr>
<td>2020s</td>
<td>A personal computer will be created that can emulate an individual human’s intelligence. This machine will cost about $1,000.</td>
</tr>
<tr>
<td></td>
<td>The “nanotechnology revolution” begins, which “will enable us to redesign and rebuild—molecule by molecule—our bodies and brains and the world with which we interact, going far beyond the limitations of biology” (p. 206).</td>
</tr>
<tr>
<td>2030s</td>
<td>A personal computer will be created that can emulate the intelligence of about 1,000 individual humans. This machine will cost about $1,000.</td>
</tr>
<tr>
<td></td>
<td>“Billions of nanobots will travel through the bloodstream in our bodies and brains. In our bodies, they will destroy pathogens, correct DNA errors, eliminate toxins, and perform many other tasks to enhance our physical well-being. As a result, we will be able to live indefinitely without aging” (p. 300).</td>
</tr>
<tr>
<td></td>
<td>As a result of the nanotechnology revolution, advances in medical science will eliminate the need for the “heart, lungs, red and white blood cells, platelets, pancreas, thyroid, and all the hormone-producing organs, kidneys, bladder, liver, lower esophagus, stomach, small intestines, large intestines, and bowel. What we have left at this point is the skeleton, skin, sex organs, sensory organs, mouth and upper esophagus, and brain” (p. 307). In essence, we will have become “nonbiological.”</td>
</tr>
<tr>
<td>2040s</td>
<td>Nonbiological humans are capable of being billions of times more intelligent than biological humans.</td>
</tr>
<tr>
<td>2050s</td>
<td>A personal computer will be created that can emulate the intelligence of the entire global human population. This machine will cost about $1,000.</td>
</tr>
<tr>
<td></td>
<td>The “robotics revolution” begins, in which “human-level robots… [are] redesigned to far exceed human capabilities. [The robotics revolution] represents the most significant transformation, because intelligence is the most powerful ‘force’ in the universe” (p. 206).</td>
</tr>
</tbody>
</table>

Advanced Research Projects Agency is spending $24 million per year on investigating direct interfaces between brain and computer” (p. 194). Again, Kurzweil does not consider this fact a “bad” thing; on the contrary, he lauds the work of DARPA. Interestingly, in a recursive and tangential way, note the familiar sound of “DARPA” from Chapter 4, which is the branch of the government formerly known as “ARPA,” that first developed the Internet (ARPANET) in the post-Sputnik years. Indeed, the same agency developed the technology that made the Internet possible is now working to usher in the Singularity. Kurzweil suggests that three key revolutions
(genetic, nanotechnology, and robotic) will unfold in the coming decades that will make the Singularity a reality, and claims that this trajectory of progress should be neither shocking nor troubling. We have come, Kurzweil reminds us, from a time when computers took up entire floors of space, to a time when computers were purchased for our home offices, then when laptops were easily carried around, and finally, to the present day when our mobile devices fit neatly into the palms of our hand. From here, he suggests that we will not think twice about inserting computers into our bodies and, ultimately, our brains. When we are, in fact, inserting computers into our bodies and brains, Kurzweil suggests that we will become nonbiological. Other theorists might use the term “cyborg.” Regardless of the language, there is a clear implication that, moving forward, the “new Other” will be constructed in terms of biological (inferior) humans and nonbiological (enhanced) humans. What’s worse, Kurzweil claims that there will be no chance of combating the “promises” of better living in the Singularity:

opposition to progress has emerged in the form of “fundamental humanism”: opposition to any change in the nature of what it means to be human… This effort, too, will ultimately fail, however, because the demand for therapies that can overcome the suffering, disease, and short lifespans inherent in our version 1.0 bodies will ultimately prove irresistible. (p. 415)

What does he mean by the ability to overcome the suffering of our “version 1.0 bodies?” In Table 1, notice Kurzweil’s projections for the 2030s, and think back to Baudrillard’s theorizing from Chapter 3 in terms of the “Promethean project” of mastering and controlling the world’s information. This is a key thread to follow into the future, as it leads to what can be considered as one of humanity’s elusive goals: eternal life. In the Singularity, by replacing the body’s non-essential biological organs, Kurzweil suggests we can prevent

90 percent of medical problems, [and] life expectancy grows to over five hundred years. At 99 percent, we’d be over one thousand years. We can expect that the full realization of the biotechnology and nanotechnology revolutions will enable us to eliminate virtually all medical causes of death. As we move toward a nonbiological existence, we will gain the
Not surprisingly, Kurzweil does not spend much time considering what might happen if, for instance, the “nanobots” that will replace our organs are “infected” with some type of virus. After all, anyone whose computer system has crashed as a result of a virus can imagine a future where nonbiological humans are constantly fighting off virtual infestations of their inner-nanobots. One is reminded of Baudrillard’s notion of “aseptic whiteness;” what joy might there be in living for five hundred or a thousand years if we are doomed to a “life” where traditional types of viruses are replaced by technological viruses? Giving Kurzweil the benefit of the doubt, death as we know it might be eliminated, but it will inevitably be replaced by another type. No matter, Kurzweil suggests, as we will be able to “plug in” to our loved ones and “download” all of their life experiences into our own digital brains. In this model, “technology” as an historical construct is obliterated as, effectively, “technology” becomes “human.” Moving forward, there are two possible ways to understand how technology might reshape what it means to be human: (1) embrace the utopian vision as implied by digital humanism, or (2) surrender to the dystopian vision of Kurzweil in the Singularity. In either case, the common element is technology itself. Turkle (1995) noted, “We come to see ourselves differently as we catch sight of our images in the mirror of the machine” (p. 9). In the posthuman future, those reflections in the mirror can take on very different visages.

“Posthuman” as utopian incantation: in theorizing about a utopian construction of the posthuman, the term might best be considered in terms of arrested extensionism: what we might call “digital humanism.” In this sense, to be posthuman is essentially analogous to the Ignatian tradition of “individual-with-God” presented in Chapter 2 inasmuch as the “individual” has a
relationship with the unknowable. For Ignatius, the unknowable was God; for the utopian posthumanist, the unknowable is the machine. In other words, in this vision of posthumanism, the human is still separated from the machine, which still serves in its historical role as a tool of efficiency. The machine is unknowable because it is not human, but the human is posthuman because of his or her close daily relationship with the machine. Pepperell (2003) described it as this: “Many of the recent advances in computing… point to a much more fluid, complex and dynamic conception of machines that… may behave in ways we simply cannot understand, or even control. These kinds of ‘unknowable’ devices are posthuman machines” (p. 129). In effect, in a world with unknowable posthuman machines, we also have posthumans who are cognizant of the unknowable. Think in terms of the increase in the amount of time people are spending on machines. The more time an individual spends with a machine, the more the individual imparts humanness into the screen. For example, the “Music Genome Project” that was behind the launch of Pandora Internet Radio in 2000. A person creates a station based on either a song or artist. While the song is playing, the person indicates his or her preference for the song by clicking an image of a “thumbs up” or a “thumbs down.” Using algorithms, the computer “delivers” the next song based on whether the person “likes” or “dislikes” the previous song. The person has the benefit of the technology, listening to music that he or she otherwise may not have or, perhaps, even discovering new artists. Amazon and other online retailers use the same technology: the machine provides recommendations based on what the person has previously purchased or reviewed. This type of machine efficiency is analogous to the assembly line – merely an evolutionary technological moment. The posthuman in this sense, however, stops there, as the person is not biologically invaded by the technology; there is still active agency for the human, as suggested by Pepperell (2003): “all attempts to know the world in itself are futile
since all data about the world must inevitably be supplied by the body’s sense (which are selective) as passed to the mind for interpretation” (p. 31). Again, the individual can still walk away from the machine. The gadget is an extension of the self, just as it has been throughout history.

In terms of the developmental process in a future of utopian posthumanism, Seidel (2008) noted an obvious springboard for discussion:

The claim that widespread prima facie improvements in cognition, such as faster computational thought, are bona fide general improvements in the human situation, is controversial. It might be urged that such faster thought is in potential conflict with more profound thought. (p. 29)

Indeed, human life and the human experience is still a slow and complicated process in the utopian frame. Individuals are not machines and are not meant to become machines; they are flesh and blood, complete with all the imperfections that come along with their biological bodies. And, part of the human experience in this model is the time to disconnect, relax, and reflect on the unknowable parts of the universe in terms of Seidel’s notion of profound thought. Pepperell (2003) referred to the “deeper philosophical problem… am “I” no more than a specific arrangement of cerebral neural tissue, a compound of synaptic probabilities that can be inserted into any suitable carcass?” (p. 16). In the utopian view, the posthuman condition still values the existential inasmuch as it engages with the meaning of human life. Furthermore, the space in which these existential crises are typically unpacked continues to be the classroom. In many ways, it is a privilege of youth to work through the fog of subjectivity, and to begin the search for one’s purpose. There is great potential here for the extensionist view of technology in guiding the search – potential that seeks to answer Cooney’s (2004) questions of the past vis-à-vis nostalgia: “the word derives from the Greek nostos (return journey, especially homeward) and
Nostalgia is a painful or bittersweet longing for what we can’t get back to, a desire not to be separated from ourselves and others by time” (p. 6). The Singularity does not seem to be concerned with the past in any way, aside from the past as being a collection of data to be downloaded into the brain (the nonbiological brain, of course). However, in the utopian vision, the posthuman can utilize technology to “bring the past alive” in ways that have not been previously possible. In a general sense, there is still a demonstrated connection to and value in nostalgia. As recently reported by the New York Times, the Encyclopaedia Britannica decided to release the last iteration of its printed volumes of books with very little expectations. Public demand for the set (which, incidentally, costs around $1,500) has been much greater than initially anticipated. Who would have suspected that, as we stand in the early stages of posthumanism, the connection to the printed page would be such a present form of nostalgia? This story may well mark the beginning of a new discursive thread of modernity. As books begin to disappear, what else is at stake? Small and Vorgan (2008) reported “neuroscience points to pathways in the brain that are necessary to hone interpersonal skills, empathetic abilities, and effective personal instincts. In Digital Natives who have been raised on technology, these interpersonal neural pathways are often left unstimulated and underdeveloped” (p. 117). Moving into the future, will young people also consider empathy and interpersonal skills as vestiges of nostalgia? Probably not, as they will have no conception of these as human traits. Utopian posthumanism, then, works to ensure that empathy and interpersonal skills—as well as intrapersonal skills—are neither lost to time nor reduced to the margins of a footnote in digital history books. At the center of utopian posthumanism is attention to what Pepperell (2003) called “the most ‘sacred’ of human attributes, such as conscious experience, creativity, and aesthetic

appreciation” (p. 100). In the utopian sense, the posthuman understands the uniqueness of the individual and the uniqueness of the human experience as separated from the machine; the posthuman fights against homogeneity.

Resisting homogeneity in the future will not be an easy task, but it is the central tension of utopian posthumanism, and necessary to retain the uniqueness of human experience. Turkle (1995) stated, “as we sense our inner diversity we come to know our limitations. We understand that we do not and cannot know things completely… Today’s heightened consciousness of incompleteness may predispose us to join with others” (p. 261). Technology companies – particularly those associated with hyperreal panopticism as presented in Chapter 4 – are well aware of this notion of incompleteness and have already begun orchestrating the movement towards homogeneity through devices. It is as if to say that once one has the same gadget as everyone else, then one is connected to the collective information and knowledge of the global network. Again, this is the dystopian vision of the Singularity: the creation of a homogeneous population of cyborgs that are kept “alive” by nonbiological nanobots. Hayles (1999) suggested, “if ‘human essence is freedom from the wills of others,’ the posthuman is ‘post’ not because it is necessarily unfree but because there is no a priori way to identify a self-will that can be clearly distinguished from an other-will” (p. 4). In the utopian view, resistance fights for freedom from the Singularity; utopian posthumanists fiercely seek self-will. Again, this is another key tenet of a posthuman curriculum. Consider this: in 1907, Pablo Picasso completed his work “Les Demoiselles d'Avignon,” an early cubist rendition of five young women that was quite controversial when first exhibited. Picasso’s vision—as is the vision of many artists—embodied a notion of radical newness: in this case, fractured identity, as suggested by the forms of the African masks that he painted on the faces of two of the women, as well as the general cubist
forms of all of the subjects on the canvas. In this painting, one sees an early twentieth century example of what, a century later, Baudrillard called “homo fractalis” (as discussed in Chapter 3). Rather than celebrate the annihilation of fractured identities, as would happen in the homogenized future of the Singularity, utopian posthumanists regress a bit and celebrate those fractured identities in and of themselves, as was the goal of the postmodern era. The visual is important here: even in the homogenized future of the Singularity, individuals would still be bound to their human forms, at least in terms of height (vis-à-vis the skeletal system); the Singularity would not necessarily eliminate physical difference, though it would eliminate cognitive difference. In the end, utopian posthumanists embrace their fractured identities, much like Picasso’s “demoiselles.” Turkle (1995) posited:

> In the story of constructing identity in the culture of simulation, experiences on the Internet figure prominently, but these experiences can only be understood as part of a larger cultural context. That context is the story of the eroding boundaries between the real and the virtual, the animate and the inanimate, the unitary and the multiple self, which is occurring both in advanced scientific fields of research and in the patterns of everyday life. (p. 10)

In the end, the utopian vision of posthumanism seeks to keep those boundaries in place, not because they reinforce a separation between individuals, but rather because they reinforce a separation between individuals and the machines that would colonize them. The nuanced tension here is subtle, but critical.

“Posthuman” as dystopian incantation: in theorizing about a dystopian construction of the posthuman, the term might best be considered in terms of the Singularity, which has already been discussed; however, whereas the utopian vision previously described focuses on the notion of the human vis-à-vis extensionism, the dystopian focuses on the nonhuman, or the cyborg – the annihilation of the “biological” human and its replacement by the “nonbiological” or “enhanced”
human – not the individual with machine, but the individual as machine. In dystopian posthumanism, then, the Singularity constructs the human in terms of Baudrillard’s suggestion of the Promethean project of controlling access to and the flow of the world’s information. Bowers (2000) called this “the messianic project of modernization” (p. 1), and why not? What other goal is there in terms of governmentality than the messianic promise of total control? Think in terms of hyperreal panopticism here: who controls the dystopian posthuman (governments? corporations?); to what end are dystopian posthumans controlled; etc.? Again, in the dystopian view (and, granted, Kurzweil and others would argue that the Singularity is not dystopian, but comprehensively utopian instead), the individual human is reduced to passivity, making it impossible to become active agents of change. In many ways, this process is already underway. Rosen (2012) noted that “half of all iGeneration teenagers and Net Generation young adults are highly or moderately anxious when they can’t check their text messages” (p. 54). In thinking of Kurzweil’s timeline for the emergence of the Singularity, things currently seem to be precariously perched on a ledge. There has not been the movement yet from the extensionist model to the internalized, but that does not mean that the movement is not coming quickly. With Moore’s law as our guide, the computer industry is still becoming twice as powerful roughly every two years. This reinforces a relatively new form of otherness that has emerged in the recent years of technological growth, as suggested by Bowers (2000): “the individuals and cultural groups that do not participate fully in the seamless web of cyberspace are increasingly framed as less developed and thus less intelligent” (p. 41). Undoubtedly, there might be serious disagreement with the argument Bowers makes here; regardless, there is some truth here. Those who are on the “other side” of the “digital divide” – that is, those without access – cannot claim to be part of the global conversations of those who are connected. Ergo, those without access are
the new marginalized. Looking forward, assuming that the Singularity does arrive, the utopian posthumanists described earlier could find themselves “Othered” for resisting the promised land of homogeneity.

The implications of dystopian posthumanism would have arguably the most critical influence over the lives of young people. Seidel (2008) questioned, “how can advanced technology exist in a nonsocial environment? The assumptions behind this challenge include child rearing necessitates others, education necessitates other, and research / production / distribution necessitates others” (p. 96). Of course, the assumption here is that, in the Singularity, when cyborgs rule the world, there is, in turn, a nonsocial environment that comes along with it. Because people will be able to “receive” all that they need (in terms of sustenance, information, etc.), they will consequently have less and less need for other people. Seidel’s question, then, becomes a provocative one. In a dystopian future, what is the fate of “advanced technology,” since we will already have “discovered” (or colonized) all of the world’s information? When people no longer have a need for other people, and when all the world is merged into a homogeneous batter of nanotechnology, there will be nothing more to learn, no more reason (or possibility) of innovation or advanced technologies. The dystopian posthumanist will have nothing more to accomplish in the Singularity, because the Promethean project will have come to an end. And then, what? Small and Vorgan (2008) suggested that this trajectory is already taking shape:

As the brain evolves and shifts its focus toward new technological skills, it drifts away from fundamental social skills, such as reading facial expressions during conversation or grasping the emotional context of a subtle gesture… With the weakening of the brain’s neural circuitry controlling human contact, our social interactions may become awkward, and we tend to misinterpret, and even miss subtle, nonverbal messages. (p. 2)

Again, this may not matter in the end, as – using the assumptions of the Singularity – there will
not be a need for nonverbal messages or facial expressions in a dystopian posthuman future. The
cyborg population will simply “plug in” whenever they need more information or to recharge.
On the one hand, communication will not consist of the exchange of ideas, as homogeneity will
eliminate the ability to think or to turn information into critical knowledge. On the other hand,
there will not be a need for critical knowledge as the cyborg mind will simply work from
programmed algorithms that, Kurzweil promises, will be much smarter than any fallible human.

In other words, the dystopian posthumanist is an anonymous member of a master race of
cyborgs, born from the Singularity, who will live at least 500 years (possibly, a thousand or
more), and who will have no need to really interact with other cyborgs, except if they want to
exchange information, or, as theorized by Seidel (2008):

> let it be considered that these beings exist in a population density roughly akin to that in
> present-day major metropolises, yet live nonsocially. The *prima facie* absurdity of this
> assumption is, of course, that beings in such proximity could exist without social
> interaction. (p. 97)

Imagine here a global population of cybernetic organisms who pass each other every day, but
without social interaction, except for, on occasion, when those cyborgs use each other as a data
jack or information port to download to one another. How awkward might those interactions be?
How does one cyborg approach another one to download their information? What if one cyborg
does not want to “merge data” with another? Will there not be a movement within one group of
cyborgs to download “more” data than other groups? Or, what if one cyborg wants to pass
viruses on to others deliberately? These are present-day problems with which society has not
sufficiently grappled. If Kurzweil’s timeline is correct, and society is on the fast track to the
Singularity, humanists and futurists had better work together (and quickly) to determine the
cybernetic code of conduct. What’s more, the underlying foundation of this entire dystopian
future is built on some of the most controversial issues of the past: eugenics. What difference is there between Hitler’s plan for a master race of Aryans in the Third Reich and Kurzweil’s plan for a master race of cyborgs in the Singularity? Haraway (1991) suggested it herself: “the main trouble with cyborgs, of course, is that they are the illegitimate offspring of militarism and patriarchal capitalism, not to mention state socialism” (p. 151).

In the end, a posthuman curriculum eschews the dystopian view of the posthuman condition that is constructed by the Singularity and, as with the Ignatian vision of the individual-with-God, seeks to strike a balance between the individual-with-machine. Extensionism is certainly preferable to a future of cybernetic homogeneity. In this conversation about the posthuman, there is an interesting disconnect that may be explained away by the Singularity and the move towards cyborg culture, but currently, as suggested by Rosen (2012),

people are attached to their devices and oftentimes driven to use them obsessively by fear and worry. Missing out on social information, work information, and our personal pursuits can put us in a state of anxiety and even cause panic attacks, sometimes with serious consequences. (p. 57)

This phenomenon is very real in the present-day. Technology addiction is now taking over for drug and alcohol addiction. In the end, it is all about the human need to control life, which is utterly uncontrollable. How, then, will being nonbiological – that is, stripped of our humanness – change this need to control? It simply will not. The Promethean project as suggested in the Singularity is simply old wine in new skin. Turkle (1984/2005) suggested, “we cede to the computer the power of reason, but at the same time, in defense, our sense of identity becomes increasingly focused on the soul and the spirit in the human machine” (p. 285). If there is any hope moving forward, it will be there – in the search for the soul – that the space of resistance is built as suggested by the utopian posthumanist framework. There is a delicate balance to be
achieved between extensionism and homogeneity, and the place where that balance might be best constructed is the classroom. Gough (1995) asked that people “understand curriculum work as a storytelling practice” (p. 72). The story of the posthuman curriculum has only just begun to be written; it is not yet ready to be told. If any vestiges of humanness are to survive the technological future, though, the story must be constructed quickly. Turkle (1984/2005) claimed

One thing is certain: the riddle of mind, long a topic for philosophers, has taken on new urgency. Under pressure from the computer, the question of mind in relation to machine is becoming a central cultural preoccupation. It is becoming for us what sex was to the Victorians—threat and obsession, taboo and fascination. (p. 285)

The cultural imperative here is rife with urgency: the riddle of the mind as it relates to the machine must no longer be taboo.

Subjectivity and the posthuman

Through the march of time, subjectivity has been informed by the social, political, economic, and technological forces at play in contexts. The conversations in Chapter 3 traced the evolution of the hyperreal era from the introduction of the television and early theorizing of Heidegger, McLuhan, and, later, of Baudrillard (among others). Using that genealogy as a road map of sorts, the chart of converging subjectivities discussed earlier in this chapter is appropriate. The arrival of ubiquitous gadgets and the plunge into simulated experiences of the screen has also ushered in the era of the posthuman and, ultimately, the era of new subjectivities. In the end, subjectivity in the posthuman era is complicated by the merging of human and machine: whereas before, in the humanist sense, subjectivities centered on notions of God and man (Who am I on Earth? How might I live on Earth to achieve eternal life?), or, later, in a postmodern sense, multiplicities of embodied humanness (I am black; I am gay; I am a woman; I am Portuguese), in the posthumanist sense subjectivities center on notions of fractured
humanness, between man and machine. The irony, of course, in the posthuman is that there may be no human element implied in the subjective assertions of young people. In a general sense, young people engage in subjective formations through their machines (I am an iPhone; I am a PC; I am Wii). Notions of humanness that have shaped discourse over the past few centuries are in danger of obsolescence, especially as children are exposed to technologies of the self at earlier ages (even infants and toddlers). In a general sense, young people are no longer seeing themselves as active agents, hence the complication of subjectivity in light of emergent technologies. Through the screen, individuals become passive agents – more machinelike. In other words, as individuals are reduced to passive agents, wherein an active sense of agency becomes a more complicated (impossible?) process, they are objectified by the screen. What’s more, young people are mired in entertainment culture and instant gratification. They have been born into a commodified world of “helicopter parents” and “delayed adulthood,” also dubbed “the Peter Pan effect.” They are colonized by business models of constant growth and uncritical presentism, the focus of which is not placed on helping them to develop agency, but on homogenization of society based on brand identity as marketed through the screen. And, perhaps most unforgivable, the corporations who control the daily lived experiences of these young people from the virtual watchtower of the hyperreal panoptic system have convinced them that this unchecked control – this consumer culture – is designed to help them, designed for their own good: to help them make more friends, to help them become more popular, to help them create a “better” image than they could have without “buying” into the system. The implications of these power systems on individual development are guided by Foucault’s (1997b) notion of the development of the subject, or “subjectivity:”

How was the subject established, at different moments and in different institutional
contexts, as a possible, desirable, or even indispensable object of knowledge? How were the experience that one may have of oneself and the knowledge that one forms of oneself organized according to certain schemes? How were these schemes defined, valorized, recommended, imposed? (p. 87)

As discussed in Chapter 4, in these formative years of the posthuman era, the subject – that is to say, the individual – is established within the institutional contexts of the dominant media and technology companies that are responsible for (1) technologies of production, (2) technologies of sign systems, (3) technologies of power, and (4) technologies of the self. Granted, some (including theorists like the French Jesuit and theorist Michel de Certeau) might question whether Foucault’s exploration of technologies herein offers a limited argument. However, this critique notwithstanding, it is safe to assume that there will always be technologies of production, sign systems, and power. What are likely to change (and, ergo, may be limited) are the elements identified in this investigation as technologies of the self. As a generalizable field, technologies of the self will likely continue to be considered as those forces that colonize the majority of the daily lived experiences of young people; however, though technologies of the self may change, governmentality and hyperreal panopticism will very likely guide the future of this particular discourse.

Regardless, subjectivity in the space of these contexts is informed only through the knowledge that the institutions project. In other words, subjectivity is limited by the structures put in place by the dominant companies of the posthuman schema, and those schema (not surprisingly) are imposed in terms of fear: fear that the young person will be “left out” of the conversations of modernity, disconnected from their peers, that they must essentially “sell themselves” to the perpetual cycle of upgrades in order to be a fully realized subject. Naturally, this type of fear solidifies the promise of a future of continual growth in terms of corporate
profits, so those dominant companies will be in no hurry to upset the balance of fear therein. As long as young people are convinced that they must be constantly up-to-date, for fear of being marginalized, the hyperreal panoptic system will continue to be successful. Considering the rapid pace of change in the current moment, it is impossible to forecast what will come tomorrow, much less five or ten years from now, which complicates subjectivity all the more. In the end, what hangs in the balance is the transformation of our collective consciousness. We are headed for a future in which the very nature of subjectivity might be challenged by a single corporate power, or, at least, a very few.

Ironically, subjectivity exists to resist objectivity, but, in an era when young people are subsumed in the screen, it is the screen that objectifies the individual. Therefore, we face a possible future governed by the fallacy of subjectivity. This future may have already begun. Foucault (1984/1988c) claimed, “broadly speaking, the ancient societies remained societies… where existence was led ‘in public’” (p. 42). In this sense, we may not be all that unlike ancient societies; however, the main difference today is that “public” takes on a new meaning. Blascovich and Bailenson (2011) posed the question as, “What is real? Merely by asking it, we suppose there must be some things we experience that are, in fact, not real” (p. 9). As young people continue to experience parts of life through the screen, the schemes of subjectivity are being simultaneously reinforced, tied ever closer to the technology companies whose goal is to objectify and homogenize the global population as it “lives” in public spaces online. Morozov (2011) explored this type of technological determinism, and posited that it “obscures the roles and responsibilities of human decision makers, either absolving them of well-deserved blame or minimizing the role of their significant interventions” (p. 290). Again, when the fate of the subject is in the hands of the corporate shareholders, the best one can hope for is at least a clever
form of dehumanization. One does not necessarily want to be cognizant of the fact that their humanness is being taken from them with each passing day, but it seems to be happening more quickly. Lanier (2010) stated, “every element in the system – every computer, every person, every bit – comes to depend on relentlessly detailed adherence to a common standard, a common point of exchange” (p. 15). In Chapter 3, Baudrillard called this the “radical sameness” that results from the forces of hyperreality.

In the end, Mansfield (2000) claimed, “subjectivity is made by the relationships that form the human context” (p. 52). Moving forward, the challenge will be simply whether there is the ability to resist the forces of those relationships, inasmuch as they serve to colonize humanity.

Vaidhyanathan (2011) suggested that digital culture, which is built upon a foundation of constant movement, an unrelenting barrage of information thrown towards the individual, is, in fact, ushering in an era of dehumanization:

> when we become habituated to the amazing technological achievements of recent years, we forget to be thrilled and amazed. We lose our sense of wonder. We take brilliance for granted, and so we ignore the human elements of fortitude, creativity, and intelligence that underlie so many tools we use every day. (pp. 51-52)

Perhaps it is inevitable, especially if we consider the notion put forth by some of these companies who control the hyperreal panoptic system, that the most important element of a globalized society is collaborative exchange. What good is collaborative exchange (the sum) when the individuals (the parts) who comprise that collaborative group have their creative edge stunted by the forces around them? Put differently, Lanier (2010) posited that the collaborative structures of web 2.0 “actively demand that people define themselves downward” (p. 19). In other words, in terms of the culture of social networking, at best, the individual is reduced to his or her latest status update; at worst, he or she is confined to the 140 characters provided by
microblogging platforms. And what can one possibly say or learn about oneself in the space of 140 characters? Borgmann (1999) suggested a rather bleak state of affairs regarding subjectivity in a digital society that is operated by avatars and virtual humans:

our omniscience and omnipotence have achieved such transparency and control of information that there are no things any more to be discovered beyond the signs. Nothing any longer is buried beneath information. Behind the virtual self-representations there are no real persons left to be acknowledged. (pp. 218-219)

In the end, what we risk in spending this time online is not only the reprogramming of the brain and the ways in which brains process information; ultimately, there is also the risk of losing that which makes us human – our humanness, as suggested by Carr (2010), “one of the greatest dangers we face as we automate the work of our minds… [is] a slow erosion of our humanness and our humanity. It’s not only deep thinking that requires a calm, attentive mind. It’s also empathy and compassion” (p. 220).

Small and Vorgan (2008) claimed, “some young people have become challenged beyond fundamental social skills. They have gotten so isolated in their digital cocoons that they fall short in their essential knowledge of the practical world” (p. 116). To remain relevant in the 21st century – indeed, to help equip young people with the tools needed to face the future with deft of thought, the goal of undergraduate education should be more focused on helping young people navigate the complicatedness of new subjectivities, in line with what Serres (1991/1997) identified as “invention:” “the only true intellectual act, the only act of intelligence… Only discovery awakens. Only invention proves that one truly thinks what one thinks, whatever that may be” (pp. 92-93). Education as discovery and experience – the type of education proposed by Dewey a century ago – is still longed for in the American system. Hopefully, history will show the 20th century – in all its empirical rationalistic grandeur – as a “lost century” in the history of
educational and curriculum theory and practice. Young people do not need “more” statistical definitions of what makes them human (“I am a 465 verbal on the GRE;” “I am a 578 quantitative on the GRE;” etc.). What they need, as recommended by Oppenheimer (2004), is something more basic: “most of all they need people” (p. 395). The Very Reverend Peter-Hans Kolvenbach, S.J., the Father General of the Jesuits from 1983-2008, gave a speech in 1993 on the topic of Ignatian pedagogy. In that speech, Kolvenbach (1993/2000) told the audience:

> Amid all the conflicting demands on their time and energies, your students are searching for meaning for their lives… Unconsciously at least, they suffer from fear of life in a world held together by a balance of terror more than by bonds of love. (p. 278)

The world is a complex place and the human lives that spin around within the world are, in many ways, suffering from the fear of which Kolvenbach speaks. On one hand, in the current trajectory of corporatism, we might collectively march forward into a future of the Singularity and surrender one type of fear for the unknown fear that awaits in a world run by cyborgs; on the other hand, we might celebrate the call to change and embrace the challenge of rebuilding the current system of education. The myopic and cacophonous conversations currently complicating the academy – in terms of standards, accountability, STEM, critical race theory, postcolonialism, feminism etc. – do nothing to assuage the coming barrage of trouble that lurks on the horizon. These discourses are based in the past, and that is precisely where those discourses will leave the people who refuse to move beyond the past and recognize the forces that loom ahead. Theorizing about the construction of a posthuman curriculum does look to the past, but only to identify the critical notions of humanness that may be most helpful in defining the “human” in the posthuman future. If there is resistance to this call of change, educators should not be surprised if they wake up in a future of the Singularity to find that they have been effectively “put out of business.” The frontier of new subjectivities is the space in which a posthuman curriculum
begins: a world complicated by the blurring lines between reality and hyperreality, between heterogeneity and homogeneity, between human and cyborg.

Towards a posthuman curriculum

There is scant research or theorizing on the posthuman condition as it pertains to education, but Weaver (2010), in his work *Educating the Posthuman*, did lament the reduction of technology to instrumental purposes... [which] restricts educators from utilizing technology as a form of poetry and creativity... There is only an open question. How will we use information technology and what meaning will we construct out of the technology? If, as curriculum scholars, we do not address this question and maintain its openness we add to the dominance of instrumentality in education. (p. 29)

Of course, in focusing on this “reduction” of technology to “instrumental” purposes, Weaver is speaking in terms of the actual use of technology in the classroom itself. In this sense, Weaver’s conversation on the posthuman embraces technology as an instructional tool through which students learn, the same way they would have learned throughout history with other technologies like the slate, notebook, calculator, overhead projector, or television. Many other recent theorists (Small and Vorgan, 2008; Davidson and Goldberg, 2009 & 2010; Rosen; 2010 & 2012) have also discussed technology in this sense. Granted, this discourse is critical, if for no other reason than to address the inflated budgets that have been dedicated to technology purchases in the past few decades. There is an entire field of study dedicated to this idea, which has been called the “no significant difference” theory (aptly, the research surrounding the notion of no significant difference has not shown that there is a significant difference in student performance in classrooms where technology is used heavily when compared to classrooms in which technology is hardly – or not – used at all). However, this approach to the conversation at hand – in terms of “educating the posthuman” – is not sufficient. Instructional technology in the classroom is only part of the conversation; the imperative does not rest in finding “better” or “more effective ways”
to use technology as an instructional tool. As curriculum theorists – and, indeed, as educators –
the emphasis needs to be more comprehensive in scope.

A posthuman curriculum moves beyond the myopic gaze of instructional technology and
towards the human experience as complicated by innovation. It is concerned with Weaver’s
(2010) suggestion that, “in the digital age, one cannot educate one’s self, so to speak, without
acknowledging the role technology plays in shaping reality and the tremendous impact
technology has in extending the sensorimotor potential of each individual” (p. 15). In this light,
the undergraduate experience should be one that teaches young people how to be human in an
era marred by uncritical presentism and the unrelenting barrage of information, combined with
instructional opportunities for the “disconnected” experience of reflection and a resistance to
 technological colonization as implied in the potential coming of the Singularity. Poised at a
critical seam in the fabric of time, a posthuman curriculum is desperately needed to address these
issues before the pace of technological development accelerates beyond human control. This
approach to teaching is meant for undergraduate students in particular for a number of reasons:
first, they are (in a general sense) building their identities separate from their parents for the first
time in their lives; second, they have survived the banality of standards-based primary and
secondary education and are (hopefully) eager to develop thought rather than memorizing
objective ephemera; and finally, these young people are developmentally appropriate to engage
with the critical issues that are shaping their worlds (that is, their cognitive processes are
generally capable of thinking deeply, or, at least, of beginning the work of thinking deeply). The
goal of a posthuman curriculum can best be conceptualized in terms of what Serres (1991/1997)
suggested as seduction: “to lead elsewhere. To split off from the so-called natural direction” (p.
8). Our undergraduates need to be seduced away from their screens, which have become (in no
unclear ways) the natural direction of modernity – away from the lure of the virtual and back towards their souls. After all, without an understanding of themselves as embodied humans, the future may become a more frightening place than many might suspect. Again, the question of humanness is always at the forefront. Akin to reading Proust, a posthuman curriculum should seek to provide young people with more opportunity to engage with the frustration that comes along with the absence of instant gratification, as so much of life’s experiences come with delayed gratification. Doll (1993) suggested that curriculum “be viewed not as a set, a priori ‘course to be run,’ but as a passage of personal transformation” (p. 4). This personal transformation is needed now, perhaps more than ever before, as young people are losing their humanness, giving themselves over to the simulated experiences of the screens of hyperreality. There are three main foci of a posthuman curriculum: (1) interdisciplinarity and a sense of history; (2) critical presentism; and (3) a sense of compassion.

Interdisciplinarity and a sense of history. Russo (2005) claimed, “human consciousness is such that if one does not know the past, one cannot understand the present or think rationally about the future” (p. 53). The process of thinking rationally about the future is at the center of a posthuman curriculum, which is built on a foundation of critical engagement with one’s relation with the present as informed by the past. For Ignatius, historicity was addressed in the Jesuit curriculum in terms of the adoption of the trivium-quadrivium. Recall from Chapter 2, the trivium (grammar, rhetoric, and logic) was considered to be the foundation of a well-rounded education, as one needed to be well spoken and erudite in one’s reasoning before one was able to move on to the more sophisticated study in the quadrivium (mathematics, geometry, music, and astronomy). In this sense, especially in the trivium, history was revisited in terms of the eloquentia perfecta – the study of Classical orators. For Ignatius, this sense of history – informed
by perfect eloquence – was necessary to help members of the Society go out into the world and engage with the business of “saving souls” under the assumption that one is more apt to follow the lead of one who is charismatic and persuasive. Indeed, Pepperell (2003) noted, “throughout the pre-humanist and humanist eras, philosophers struggled with problems concerning the relationship between gods, nature and the human being” (p. 31). For Ignatius, who fought to create a society of humanist educators, the question of “what to leave in the past and what to take into the future” as a little different than our current predicament. For the early Jesuits, Modras (2004) claimed,

> From the perspective of some centuries later, the Renaissance appears as a bridge from the Middle Ages to modernity. But those who were building the bridge looked back. They viewed their age primarily as a revival of the past, a rebirth of arts and letters modeled after the glories of Greece and Rome. (p. 55)

The same cannot be said today, as those of us who are building the bridge know that what lies ahead is not primarily a revival of the past, nor should it be. Instead, it should be informed by the past, while embracing the innovations of human progress – but again, the emphasis here is on the notion of human progress.

> The foundation of the current bridge that spans the crossroads of time is built on Russo’s (2005) theorizing:

> Any explanation, however speculative, of the deeper forces that govern the period shift since the 1980s should take into account at least three current views: technological determinism, which maintains that the technological system is grinding the world together; second, the clash of civilizations that maintains antithetically that there are cultural forces that are driving the world apart; and a third view, which embraces a combination of factors, some technological, others not. (p. 8)

In a posthuman curriculum, an interdisciplinary approach to learning embraces a sense of history to help students development knowledge; in effect, to help students break the chains of the past, inasmuch as it has been locked into the absurd limitations of compartmentalized separatism in
the K-12 system. The ideal construct of a student of the posthuman curriculum can best be
summed up in the image that Serres (1990/1995) suggested as the “instructed third,” or
“knowledge’s troubadour:”

expert in formal or experimental knowledge, well-versed in the natural sciences of the
inanimate and the living… preferring actions to relations, direct human experience to
surveys and documents, traveler in nature and society… archaic and contemporary,
traditional and futuristic, humanist and scientist… knowing and valuing ignorance as
much as the sciences, old wives’ tales more than concepts… alone and vagabonding,
wandering but stable; finally, above all, burning with love for the Earth and humanity.
(pp. 94-95)

Overall, this multi-faceted vision of an educated person seems to be overwhelmingly complex –
perhaps even seemingly impossible to achieve over the course of an undergraduate degree.
Granted, these are lofty goals, but the alternative (in the Singularity) necessitates this type of
radical shift in thinking of the purposes of undergraduate education. Perhaps these goals will not
“be met” in every individual case, but as long as the foundation is laid in this vision, the process
of lifelong learning takes over and, hopefully, the individual can live a life informed by the
essential hope that comes with the human experience and an appreciation for what may be lost if
we are doomed to a future of cyborgs running the world. In the current system, the infatuation
with data – with information for information’s sake – is woefully inadequate for dealing with the
problems of modernity; this has apparently been the case for quite some time, as indicated by
Dewey (1938/1997): “Almost everyone has had occasion to look back upon his school days and
wonder what has become of the knowledge he was supposed to have amassed during his years of
schooling” (p. 47). The responsibility, then, for ushering in this new paradigm of the posthuman
curriculum, rests with those who teach. Perhaps “teach” is not the best word here; back to Doll’s
notion of curriculum as transformative process, those who work with students in the posthuman
curriculum are ultimately responsible for transforming young people, and it will require
passionate dedication, as suggested by hooks (2010):

By the time most students enter college classrooms, they have come to dread thinking. Those students who do not dread thinking often come to classes assuming that thinking will not be necessary, that all they will need to do is consume information and regurgitate it at the appropriate moments. (p. 8)

In the current system, any course that is not designed in the “regurgitation model” of education – that is, anything that cannot be measured by an objective test – is considered “easy” or “not rigorous,” as if regurgitation is the model for intellectual development. If students have, as hooks suggests, come to dread thinking, it is “thinking” as defined by the constructs of a society infatuated with standardized tests and objective measures of the human experience. Part of this work of resistance is to emphasize the role of the humanities. It is an imperative about which Dewey (1938/1997) wrote nearly a century ago: “how shall the young become acquainted with the past in such a way that the acquaintance is a potent agent in appreciation of the living present?” (p. 23). In the current model of education, the instructional gaze is too often focused on the future; worse, the private lives of young people outside of the classroom – inasmuch as those lives are driven by the rhythm of gadgets and innovations – are typically always looking to the future. Again, the sense of history and interdisciplinarity requires the student to ponder the past in hopes of informing the present and, ultimately, the future, as suggested by Russo (2005), “any assessment of the humanities in technological society should refer, if only briefly, to their foundations, to their concepts of freedom and the individual, civitas and humanitas, and the civilizing mission they have performed during their long history” (p. 25). Part of civitas and humanitas comes from what Serres (1991/1997) called “dangerous” exposure to the other: “there is no learning without exposure, often dangerous, to the other. I will never again know what I am, where I am, from where I’m from, where I’m going, through where to pass” (p. 8). In the
present moment, that dangerous other for young people, sadly, seems to be the outside, embodied world. And, because of this evolutionary development, the human risks a future of isolation. Serres (2008/2011): “Humans no longer belong to themselves either… Therefore, *Homo nullius*: man belongs to no one. He only belongs to himself” (p. 80). The classroom must become a space to contest the notion of homo nullius, and the work of the classroom requires engaged participation by all those in the room, as posited by Nussbaum (2010), “each student must be treated as an individual whose powers of mind are unfolding and who is expected to make an active and creative contribution to classroom discussion” (p. 55). This Socratic ideal is common in many liberal arts institutions, but without a well-trained professor, students will not receive the benefit of the system.

Critical presentism. For Ignatius, “critical presentism” was constructed in terms of the process of discernment, which (from Chapter 2) required a great deal of individual thought and rumination on one’s position in relation to (and one’s affect on) the world around them as part of the process of understanding the gnostic sphere of being. At the dawn of the humanist era, discernment provided people with the opportunity to explore various possibilities for pious living in the search for active agency. Ignatian discernment was built on a foundation of mystical spirituality, inasmuch as it shifted focus from a solely God-centered experience to an individual-with-God experience. In a posthuman curriculum, a new type of discernment should lead to an individual-with-machine experience. In other words, students of a posthuman curriculum should be required to grapple with the gray areas of human discourse in its emergent imperfection, especially vis-à-vis the human relationship to technology, the utopian vision of posthumanism. Serres (1991/1997) suggested, “nothing is more difficult than trying to determine of what our present consists… To find the contemporary, a difficult thing. To discover what one is, a much
rarer invention still” (p. 96). These two notions—to find the contemporary and to discover what
one is—are central to critical presentism. Consider the following three stories.

In November 2008\(^62\), Florida teenager Abraham Biggs used his webcam to live stream his
suicide on his website. The ordeal began with his blogging about wanting to end his life and his
announcing that he would stream the suicide itself. People who found his posts tuned in and
watched as Biggs, in front of the camera, took an overdose of prescription medication and lay
down on his bed to fall asleep. Some viewers on his site posted comments that encouraged him
to kill himself; others laughed at the spectacle and posted hateful remarks – still, others thought
the entire scenario was an elaborate prank. After about 12 hours of streaming his unmoving
body, some who had witnessed the virtual suicide decided to report the situation. No matter. Too
late. Biggs was already dead by then.

In September 2010\(^63\), Tyler Clementi, an 18-year-old first year student at Rutgers
University in New Jersey arrived at his dorm room and told his roommate that he was having a
guest over and asked for privacy. The roommate, Dharun Ravi, knew that Clementi was having a
clandestine homosexual affair and agreed to leave, but also left a webcam pointed at Clementi’s
bed. Apparently thinking the situation was amusing, Ravi posted updates about Clementi’s secret
life on various social networking sites to further humiliate the young man. The following day,
Clementi left Rutgers for New York City and posted a status update to his Facebook account that
read simply, “Jumping off the gw bridge sorry.” A week later, Clementi’s body was found
floating in the Hudson River just north of the George Washington Bridge.

In January 2012\(^64\), in New Orleans, after the BCS championship game between Alabama

\(^{62}\) http://abcnews.go.com/Technology/MindMoodNews/story?id=6306126&page=1#T4DHYhyPV9A
\(^{63}\) http://topics.nytimes.com/top/reference/timestopics/people/c/tyler_clementi/index.html
\(^{64}\) http://www.nola.com/crime/index.ssf/2012/01/nopd_is_asking_publics_help_in.html
and Louisiana State University, a smartphone captured video of a bizarre incident at a fast food
restaurant on Bourbon Street. A lone LSU fan – intoxicated and incoherent – was slumped over a
table in the restaurant surrounded by legions of intoxicated Alabama fans. As the camera
recorded, the Alabama fans began by taunting the LSU fan, first playfully, then, over the course
of a few minutes, more intrusively until an Alabama fan exposed his genitals and began thrusting
them on the unresponsive LSU fan. As this scene unfolded, cheers of happiness and
encouragement can be heard in the background; within days, the video was posted online and
went viral. Within weeks, the district attorneys of both Baton Rouge and New Orleans became
involved in the case and finally, 32-year-old Brian Downing surrendered himself to the New
Orleans Police Department where he was booked with sexual battery and obscenity.

What do these stories have in common? The clumsy use of technology by a generation of
people who do not seem to understand the implications of hyperreal life. Had people taken Biggs
seriously and reported the unfolding tragedy sooner, he may still be alive today. Clementi was
young and confused and his death is a heartbreaking story, but ask a group of first year students
to separate the homosexual element from the scenario and decide whether they would want their
roommates to secretly stream their sexual encounters in the dorm rooms and post those links for
all the world to see. You would elicit gasps of horror or dismissive laughter. Yet, this possibility
is unnervingly present. Downing’s drunken antics may have seemed like it was “all in good fun”
in the spirit of a huge victory, but with ubiquitous cameras in our surveillance society, he now
faces a possible lifetime as a sex offender. Again, ask a group of first year students whether they
would want their drunken shenanigans broadcast on the web. Certainly not. People make
mistakes. People are cruel to one another. People suffer. And no promise of technological

http://www.nola.com/crime/index.ssf/2012/01/alabama_fan_wanted_in_sexual_a_1.html
homogeneity will make life “better” for the living; the only promise in a possible future of the Singularity is a new set of as yet unseen mistakes, cruelty, and suffering.

Students should be provided with opportunities to explore why current events matter to their own lives, especially because often, those current events are uncritically “consumed” as passing headlines that are of no consequence. The human condition as affected by technology is a complicated construct that requires reflection – a process that is often slow and sometimes painful – and in the future, reflection may become a complicated notion because it requires the individual to pause. Rosen (2010) noted:

All brain activity is coordinated in an area of the brain called the prefrontal cortex. As we grow and learn, the prefrontal cortex is also emerging. Cells in the prefrontal cortex continue to learn how to make connections between nodes, to juggle multiple tasks, and to make informed decisions, until the prefrontal cortex is completely developed in the late teens to the mid- to late twenties. So, to recap, learning is composed of concepts that are all interconnected, based on learning through the senses, and all of this is controlled by a specific area of the brain that takes up to thirty years to develop. (p. 100)

Rosen tells us that the prefrontal cortex takes up to thirty years to develop. Kurzweil, in theorizing the Singularity, claimed that the twenty years of information that an individual “receives” over his or her academic career will be downloaded to the brain over the course of a few short weeks. The suggestion that Kurzweil makes implies that the human brain, and specifically, the prefrontal cortex – which (according to Rosen) takes up to thirty years to develop – will one day be physically reprogrammed to condense the thirty years of neural development into a month, a week, or, perhaps, even a day. Without critical presentism, there is a sense of surrender to the Singularity. If the brain is reprogrammed to be more passive and machinelike, a posthuman curriculum begins the work of resisting that reprogramming in earnest.

As it stands now, however, the chemicals in the brain govern the brain’s functions. In
particular, what can be treated as one of the most (perhaps the most) important chemicals for educators to consider is dopamine. Willis (2010) stated

The brain favors and repeats actions that release more dopamine, so the involved neural memory circuit becomes stronger and is favored when making similar future choices. However, if the response is wrong, then a drop in dopamine release results in some degree of unpleasantness. (p. 55)

Think in terms of cause and effect. Recall the discussion of the “dopamine reward system” from Chapter 3. If a student is in class and her phone is resting on her lap and begins vibrating, she will hurriedly pick it up to see what the notification is. Meanwhile, as she checks her phone, she loses sight of what the professor is doing in front of the classroom. In a general sense, as illustrated here, the cell phone elicits a release of dopamine in the student’s brain; the professor’s lecture results in a drop in the dopamine release in the brain. Educators who work in a posthuman curriculum understand these functions of the brain and ensure that the students in the classroom understand these functions as well. It is imperative that young people understand their own bodies and think critically about their own individual thought processes. The body can no longer go on as an unknowable entity. As suggested by Serres (1985/2008), “knowledge cannot come to those who have neither tasted nor smelled. Speaking is not sapience, the first tongue needs the second” (p. 153). In its essence, inasmuch as it demystifies the body and the senses as prerequisite for critical thinking, a posthuman education empowers the human. After all, Willis (2010) reminds us of the ultimate goal of education: “to keep all students engaged and participating because only the person who thinks, learns” (p. 56).

A sense of compassion. For Ignatius during the formative years of the humanist period, the most important consideration in one’s time on Earth was on compassion: what he called the well being of the soul. Ignatius envisioned compassionate work that was aimed at the saving of
souls; that one was able to understand one’s place on earth – and after discerning the meaning in one’s soul, to help others on that journey to self awareness. In these formative years of the posthuman era, Baudrillard claimed that there is no longer any compassion, because the hyperreal experience has eliminated the soul from consideration. This chapter began with a brief mention of Aristotle’s *De Anima* in which it was suggested that the soul is best described in terms of the encompassed human experience (knowledge, perception, sensation, and imagination). The essence of the human – physical movement, the process of thinking, communicating with others, or breathing – and the process of understanding one’s essence and of realizing one’s potential, is in danger. Today, young people are more likely to be able to rattle off whatever various collections of ephemeral data have crossed their screens than to contemplate compassion to themselves or to others. This chapter began with Whitman’s poem, “To a Pupil,” which was originally published as part of his collection, *Leaves of Grass*, and challenges the student to fight for the reform of oneself. It is a fitting way to end this investigation. After all, even with the best teachers and professors standing at the front of the classroom, without student investment – that is, without students who are willing to fight for their own selves – a posthuman curriculum may just as well never exist. Young people – inasmuch as they will be on the front lines of the formation of discourse in the next decades – must believe in and value the unknowable in their own lives. In the end, young people must believe in and seek out compassion in a world mired in technological complications.

Turkle (2011) suggested, “robots have become a twenty-first-century deus ex machina… In a complicated world, robots seem a simple salvation. It is like calling in the cavalry” (p. 11). Turkle speaks to the optimism that surrounds our new and emerging technologies, that they are capable (in our naïve points of view) of accomplishing anything because, after all, the best minds
of the present day have created these machines. What’s more, the image of the deus ex machina is doubly appropriate – on the one hand, the technological prowess of machines does have the sort of unexpected brilliance implied in the term itself; on the other hand, the literal translation – “god of the machine” – exposes the sort of new religious experience that technology promises, especially in terms of its ability to fix all of our earthly problems. However, as Palmer (1998/2007) suggested, “if we want to support each other’s inner lives, we must remember a simple truth: the human soul does not want to be fixed, it wants simply to be seen and heard” (p. 156). As posthuman educators, we must always make a point of seeing and hearing the souls of our students – teaching as compassionate enterprise. It is a difficult prospect, to be certain, but one that cannot wait much longer. If technology continues by the march of Moore’s law and the Singularity begins to take shape with the passing years, the compassionate soul itself may be doomed. As posthuman educators, we must fight against what Serres (2008/2011) identified as the masters of space… They are the owners of the world in terms of volume, but also of the social bond. They are the masters of objects, but also of relations between humans… Replication will henceforth govern humans. You will speak no more, you will no longer transmit, you will only imitate their noise. So they have become the owners of our souls, soiled by ugliness and burdened by repetitions to the point of senility and alienation. SOS, save our souls! (pp. 58-59)

For better or worse, compassionate attention to oneself and the world is required to help remind young people of their own importance in the fabric of time. The work begins with a culture of listening and the development of emotional intelligence. If the violent history of the 20th century has taught us nothings, it is that old adage: “war is about old men fighting and young men dying.” When the voices of the room are so loud that no one is being heard, frustration sets in – individuals and groups feel alienated from one another – and ultimately, the only conclusion that seems to make sense is to fight. Ironically, whereas the 20th century was a place for people
fighting people, the 21st century is shaping up to be a place where people are fighting machines. If young people feel valued, if they believe in the possibility of dialogue, if they see opportunity as informed by discursive process, they can begin the work of making their lives more meaningful than they can by being reduced to passivity. Ultimately, students need to experience the classroom as a place for laughter, as hooks (2010) claimed, “laughter, humor in general, was associated in my mind with letting go” (p. 70). The notion of “letting go” through laughter is important, as the existential issues that hang from the Singularity tend to verge on the nihilistic, but – at least for the time being – it does not necessarily have to be that way. A posthuman curriculum is a curriculum of idealism and optimism. It must be. A few cases to consider:

In March 2010, CNN reported a story out of South Korea where police arrested a married couple whose child starved to death at home while the couple spent their days raising a virtual child online in a virtual world. In October 2010, CBS reported a story out of Jacksonville, Florida, where a woman was arrested for shaking her 3-month-old son to death after his crying interrupted her “FarmVille” game on Facebook. And, in February 2012, Time reported a story out of Albemarle, North Carolina, about Tommy Jordan, an I.T. worker who discovered an adolescent rant that his daughter posted on her Facebook account. As adolescents often do, Jordan’s daughter lamented the demands of her suburban life, including requests from her parents to do chores, and wrote an “open letter” to her parents about how terrible she considered their parenting style to be. When Jordan discovered the post, he was so incensed that he did what many parents might do in the digital present: he posted a response to his daughter online; however, that response was anything but normal. It took the form of a nearly nine-minute

67 http://newsfeed.time.com/2012/02/12/angry-father-shoots-daughters-laptop-over-facebook-post/
video (posted on YouTube) in which Jordan read a printed version of his daughter’s letter, at the end of which, he let her know that her life – which she indicated was so miserable because of her parents’ rules – would be getting much worse: Jordan produced his .45 handgun and recorded himself repeatedly shooting his daughter’s laptop until it had several holes through it. The video went viral and received over 30 million views in two months. Obviously, none of these parents would receive parenting awards, but the key point here is that technology is not “solving” the complicated problems of human life, including complex family dynamics, divorce, adultery, etc. In each of these cases, there is a hopeless absence of compassion.

In February 2012, the New York Post ran an editorial\(^68\) by 18-year-old Zach Prochnik, a high school senior who explained, “Why I quit Facebook.” In that piece, Prochnik gave a glimpse into the lives of 21\(^{st}\) century adolescents: friends in the room together, multitasking with various screens glowing and gadgets scattered around the room. As Prochnik scanned his Facebook account, he had a moment of existential angst, followed by a moment of clarity, as he realized that the relationships he and his friends built via the screen were shallower than they may have anticipated; he noted that all Facebook accomplishes is the introduction of a new type of adolescent social anxiety. As much as theorists like Kurzweil may want this to be the case, technology does not create a panacea for the awkwardness of growing up and living a human life. Especially, youth culture, with its history of exploration and rebellion – of storm and stress – may be altered by technology, but gadgets to nothing to assuage the social clumsiness of growing young people. Bauerlein (2008) painted a less-than-amorous image of the Net Generation as a group who – because of their infatuation with technology – are not ambitious enough to develop agential notions for societal improvement; instead, he claimed,

\(^{68}\) http://www.nypost.com/p/news/opinion/opedcolumnists/unfriend_VhP9QLXispf2RzznaNHPNK
They drift through their twenties, stalled at work and saving no money, but they like it that way. They congregate just as they did before college, hopping bar to bar on Friday night and watching movies on Saturday. They have achieved little, but they feel good about themselves… they justify their aimless lifestyle as a journey of self-discovery. (pp. 170-171)

This type of hopelessness and nihilism may be the result of a sheer unfamiliarity with oneself. The work of a posthuman curriculum – inasmuch as it relates to teaching compassion – requires instructors who can connect with students to begin the work of saving the souls. Palmer (1998/2007) claimed

> Good teachers possess a capacity for connectedness. They are able to weave a complex web of connections among themselves, their subjects, and their students so that students can learn to weave a world for themselves… The connections made by good teachers are held not in their methods but in their hearts—meaning heart in its ancient sense, as the place where intellect and emotion and spirit will converge in the human self. (p. 11)

Here, the heart is an appropriate image to help formulate the vision of a posthuman curriculum. The human experience should be the lifeblood of the educative experience and, in turn, students should be able to develop intellect in which emotion is not treated like something of which they should be ashamed. The “real world” that is so often lauded for its superiority when compared to the “ivory tower” eschews any sense of emotion (think of the archetype of “the strong, silent type” that is ingrained as part of the American dream culture); ironically, daily lived experiences are hardly without emotional complicatedness. The current educational model does not make allowances for students to engage with emotion and, because of that, the system not only serves to silence the voices of the students themselves, but also to estrange them from each other. No wonder the Net Generation escapes into their screens – they have never been taught to (or allowed to) listen to each other. hooks (2010):

> Students listen to one another’s stories with an intensity that is not always present during a lecture or class discussion. One of the ways we become a learning community is by sharing and receiving one another’s stories; it is a ritual of communion that opens our
minds and hearts. Sharing in ways that help us connect, we come to know each other better. (pp. 51-52)

In the end, a posthuman curriculum is a revision of traditional notions of humanistic education. However, whereas traditional humanistic education is informed by one specific historical tradition in the western-centric model, a posthuman curriculum does not privilege one tradition over another. In keeping with the theme of embracing one’s essential humanness and unique strangeness, a posthuman curriculum moves beyond the radical sameness that is implicit in any type of standardized educational experience. A posthuman curriculum is constantly in flux, guided by interdisciplinarity, critical presentism, and compassion, but it has no common reference outside of the space in which it is being taught. It is not standardized by institution, region, or political structure; instead, it is instant and dynamic between the community of learners as they exist in time and place, and the content of the course is always informed by and reacts to current events, so that students are able to learn how to think critically about the emergent world around them, against perpetual futurism and the homogenization of hyperreal panopticism.

The soul is somehow everything

The 19th century French journalist Alphonse Karr coined the phrase, “plus ça change, plus c’est la même chose” – essentially, “the more things change, the more they stay the same.” The current paradigm shift towards the posthuman is, as stated throughout this investigation, in its formative years. There is still time to resist the possibility of the Singularity. Presently, though young people are changing in terms of the biological processes of neuroplasticity, they are still rather conventional as developing adolescents. Small and Vorgan (2008) noted, “rather than face the challenges of face-to-face social life, [college students] feel a greater sense of control by
using social networking sites, email, instant messages, and chat rooms” (p. 51). Again, there is no implied scheme within the posthuman curriculum to negate the value of technology, but rather, to help students understand their relationship to technology and to one another. Students need to recognize that they are, as theorized by Serres (1991/1997), latecomers, still astonishing the Earth with their youth, gauche, rigid, stiff, only a few million years old, therefore maladapted, arrogant about their little science… first, because they arrive last. Inanimate matter, flora and fauna are often older than they. Hominids seem not to know that their history, new and recent, repeats a thousand already completed cycles. (p. 87)

As young people are engaging more with screens and less with each other, they are losing their collective sense of history; however, that history is essential if they are to make informed decisions about the ways they might be able to shape the future and their own lives. At the same time, professors need to recognize, as Palmer (1998/2007) proposed, “the subjects we teach are as large and complex as life, so our knowledge of them is always flawed and partial… the students we teach are larger than life and even more complex” (p. 2). If educators are serious about re-constructing humanness in the classroom and helping students to engage with the complicatedness of new subjectivities, the work will require individual dialogues with individual students. As stated in Chapter 3, a student notices when the professor knows his or her name. Noddings (2005) stated, “the desire to be cared for is almost certainly a universal human characteristic… everyone wants to be received, to elicit a response that is congruent with an underlying need or desire… They do not want to be treated ‘like numbers’” (p. 17). The lives of young people are hopelessly infected by numbers – from absurd grading systems and standardized test results of primary and secondary education to their commodified home lives as controlled by the gaze of hyperreal panopticism. If educators are successful in helping untangle the digital bonds of subjectivities – that is, in creating healthy, intelligent, embodied humans –
they might also realize an unexpected byproduct in the creation of a generation of optimists rather than digitally colonized cynics. Kahneman (2011) indicated, “optimistic individuals play a disproportionate role in shaping our lives. Their decisions make a difference; they are the inventors, the entrepreneurs… not average people. They got to where they are by seeking challenges and taking risks” (p. 256). Without the self-confidence that comes along with being an optimist, there may be little hope of resisting the Singularity; but part of the process of building confidence implies taking risks. As a posthuman curriculum focuses attention on the soul, it should empower students to engage with failure, to learn from their mistakes (and from the mistake of others in the past), to start anew with fresh perspectives and the ability to apply old knowledge in new ways. If we can accomplish all of these goals, we might see what hooks (1994) called “excitement in higher education” (p. 7). hooks theorized about the process of teaching to transgress and of education as a practice of freedom. Now, perhaps more than any other time in the past century or more, as we are faced with a future where cyborgs have eliminated traditional constructs of humanness, there is a great need for transgression beyond the status quo, towards freedom. And freedom – from digital colonization, from the forces of hyperreal panopticism, from the Singularity – is what a posthuman curriculum seeks more than anything else.

Dewey (1938/1997) posited

The educator more than the member of any other profession is concerned to have a long look ahead… the very nature of his work is obliged to see his present work in terms of what it accomplishes, or fails to accomplish, for a future whose objects are linked with those of the present. (pp. 75-76)

Dewey was a visionary. And like Dewey, educators in the present day need to remain insightful enough to have the futuristic gaze that can inform the work of the immediate and distant future.
Whatever changes might come to the classroom moving forward, educators will need to remind students of the process of lifelong learning. Just as Ignatius and the early Jesuits emphasized the nature of adaptability when constructing their educational network, so too should educators today begin sketching alternative systems that do not have to rely on the absurd tools of the 20th century in the form of banal standardization. The objective measures of the 20th century will not help students to develop agency in an era when technology is changing what it means to be human or to engage in informed lifelong learning as conceived by Davidson and Goldberg (2010): “the increasingly rapid changes in the world’s makeup mean that we must necessarily learn anew… to face the challenges of novel conditions… [and] of applying new lessons known to unprecedented situations and challenges” (p. 71). In order for this to work, the classroom must be constructed as hooks (1994) envisioned it, as the “most radical space of possibility in the academy” (p. 12). Within that radical space, hopefully, students can learn to grapple with the new subjectivities that are complicated by the hyperreal experience. That work should begin in the undergraduate classroom, and should be centered around the mystical processes of the imagination, as suggested by Serres (1985/2008), who focused on “the five senses, still on the verge of departure towards another adventure, a ghost of the real timidly described in a ghost of language… I should have liked to call it resurrection – or rebirth” (p. 345). A posthuman curriculum, then, becomes a curriculum of awakening, much the same as Ignatius’ own awakening, to a new level of understanding of the human relation to the knowable and unknowable universe, and where students realize that subjective discourse and is not the enemy of the classroom. A posthuman curriculum, as it eschews the dystopian view of the posthuman condition that is constructed by the Singularity, and, as with the Ignatian vision of the individual-with-God, seeks to strike a balance between the individual-with-machine, constructs a welcome
narrative from which to build a counterattack. When it comes to technology, extensionism is certainly preferable to a future of cybernetic homogeneity and the death of the soul.

In the present undergraduate classroom, there is still hope on the faces staring back from the desks across the room. This generation of young people has not surrendered to apathy; they simply have not yet discovered ways in which they can build active agency and, subsequently, to recreate the world in their vision. Christian (2011) stated quite poignantly, “we all start off the same and we all end up the same, with a brief moment of difference in between. Fertilization to fertilizer. Ashes to ashes. And we spark across the gap” (p. 131). As technology colonizes increasingly more time of the daily lived experiences of young people, that “moment of difference” is at risk; that “spark” fizzles out. There is great possibility in being young, and part of that possibility comes from engaging with one’s essential humanness and unique strangeness – the harnessing of the soul. In a culture of radical sameness and perpetual futurism, the soul is diminished by the screen. The 16th century Jesuit Juan de Bonifacio was correct when he claimed that the education of youth is the renewal of the world. As posthuman educators, we must embrace this urgent work in earnest and help our students move beyond their overwhelmed frustrations and towards a future in which their souls are left intact.
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APPENDIX: GLOSSARY OF KEY TERMS

Cogito interruptus – term coined in 1967 by Italian theorist Umberto Eco, literally the interruption of thought processes.

Cult of the amateur – term coined in 2005 by author Nicholas Carr, the phrase addresses the growth of Web 2.0 communication and suggests that the explosion of user-generated discourse on the Internet complicates the notion of authoritative commentary.

Discernment – in the Ignatian tradition, the term refers to the process of evaluating one’s life and choosing a path that best fits one’s talents and interests.

Dopamine reward system – term used by neuroscientists to describe the implications of ubiquitous technology on the processes of the brain; the idea is based on a suggestion that the level of Dopamine in the brain increases when one is “contacted” by one’s peers through gadgets (social networking, text messaging, email, etc.).

Eloquentia perfecta – a part of the epistemological framework of Jesuit education, the term literally means “perfect eloquence;” to achieve perfect eloquence, students of the Jesuits were required to complete an education that emphasized the development of rhetorical skill based on Classical traditions of Greek education.

Homo fractalis – literally “fractured man,” the term was used by Baudrillard to describe the problems associated with being human in an era of hyperreality and simulated virtual experiences.

Homo nullius – essentially “man belonging to no one,” a term used by Serres to describe the nature of being human in a world where identity development is complicated by isolationist tendencies of individuals.

Hyperreal panopticism – the merging of two traditions: hyperreality from Baudrillard and panopticism from Foucault. This term seeks to unpack and examine the systems of control in the globalized, digitized, 21st century.

Hyperreality – from Baudrillard, the term refers to a notion of reality that is complicated by the simulated experiences of the digital age.

Modus Parisiensis – literally, the “Parisian method,” this was the method of instruction that Ignatius found in his years as a student at the University of Paris. The method included a solid foundation in grammar, the division of students into classes ranked by student ability, and the notion of mastery examinations before progression to subsequent courses.

Moore’s law – a concept developed by computer scientist and co-founder of the Intel corporation Gordon Moore in 1965, which suggests that capacity of the integrated circuit doubles roughly every 18 to 24 months.
Neuroplasticity – a term used by neuroscientists to explain the malleable nature of the brain that results from the contexts and daily practices of an individual.

Paideia – from Greek tradition, this term refers to the education of a child to recognize and work towards a meaningful and fulfilling adult life.

Posthuman curriculum – a curriculum that eschews traditional notions of Western humanistic education; a curriculum that emphasizes interdisciplinarity and a sense of history, critical presentism, and a sense of compassion to combat the dehumanization of young people and the educative experience.

Posthumanism – a generalized term that refers to the digital era, where the focus is away from a man-centered universe and when subjectivity is negotiated between man and machine.

Radical sameness – a term coined by Baudrillard to refer to the problems associated with template culture and the simulated experiences of the screen; essentially, the term addresses the phenomenon of individuals losing individuality in favor of standardization on the World Wide Web.

Simulation – from Baudrillard, this term explains what occurs to real objects as those objects move through the four successive phases of the image, which begins with the reflection of reality and essentially ends in the digital screen, where the original object is without any relation to reality whatsoever, and is instead a programmed, or virtual, reality.

Singularity – from Kurzweil, this term refers to a theoretical moment in which man and machine merge, and when technology transcends biology.

Subjectivity – from Foucault, this term seeks to establish the framework of an individual’s experiences and identity, essentially to resist the objectification of the individual himself or herself.

Trivium-quadrivium – from Renaissance humanistic tradition, this term refers to the three foundational subjects (grammar, rhetoric, and logic) which students were required to learn before the four advanced subjects (mathematics, geometry, music, and astronomy).

Uncritical presentism – this term refers to the phenomenon of the staccato, or abbreviated, thought processes that accompany the digital era, when individuals generally suffer from a constant barrage of information without having the opportunity to appropriately reflect on the contexts of what is happening in one’s life.
VITA

Brad Petitfils received his Bachelor of Arts degree in English (emphasis in literature) from Loyola University New Orleans in 2001, and his Master of Science degree in Secondary Education from Loyola University New Orleans 2002, where he worked as a graduate assistant under Dr. Margaret Dermody on a U.S. Department of Education grant, the New Orleans Consortium for Technology Integration and Implementation in Teacher Education, or NOCTIITE. He received the “Hilda C. Smith Award” for outstanding graduate student in 2002.

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